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THE INDIAN LANCET.

A Weekly Journal of Medicine, Surgery, Public Health and of General Medical Intelligence.
Edited by RUDOLPH MONNIER M.B., M.S., Edin.

Vol. XXXI.] CALCUTTA, MONDAY, APRIL 6th, 1908. [No. 14

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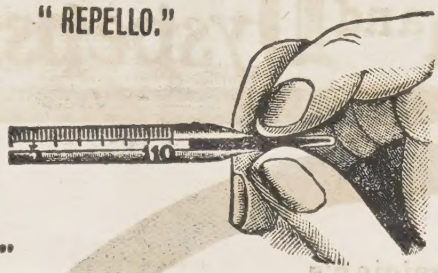

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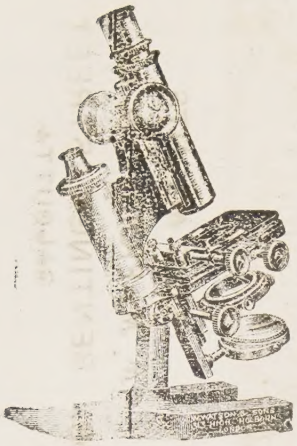

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By HENRY FISHER, M. D.

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Because of the normal acid condition of the stomach it is not acted upon, hence the non-gastric irritation, until it reaches the intestines, where it is decomposed into its component parts and exhibits the properties of salicylic acid and formaldehyde.

The process of manufacture being open to inspection and its methods thoroughly explained, justice to whatever appeals to one's unbiased judgment and proper regard to the demands of a suffering and confiding clientele compel the use of whatever means may appear to serve that end.

Many useful introductions into medicine are denied the attention they deserve, because of an improper and imperfect use of the same. A spark of fire may be extinguished by a drop of water, yet, neglected, may assume such dimensions that a great volume of water will be required to control it. The longer a trouble continues, the more disastrous its effects, which effects may remain for some time after the condition which produced them has been removed.

The greater the trouble, the more pronounced must be the method of its treatment, and ofttimes more prolonged, to be effective.

You cannot control an extensive conflagration with a garden hose. That requires the efforts of the fire department of a large city; and were they to desist from their efforts before a complete subduing of the fire, there would, in all probability, be an awakening of the slumbering flame, and the subsequent destruction, if not complete, would add greatly to what already proceded it. As with fire, so with disease, especially rheumatic troubles. The treatment, to be effective, is dependent upon the extent the disease has assumed and the length of time it has existed.

Many a meritorious drug has been discarded because of the administration of too small a dose, and a too limited use of the same.

We must remember, also, that a disease may be obliterated, but if the condition and circumstances that produced it continue to exist, as an inevitable consequence it will reappear as a new invasion. In my use of acetyl-forma-sal, I made the mistake at first, as others perhaps have done, of giving insufficient doses and not looking for the cumulative effect. When I found it devoid of any gastric irritation or cardiac depression, I was encouraged to administer larger doses and persist longer in their use, until results were obtained; and found, however, it took less quantity by this means than if smaller doses had been given.

The value of salicylic acid as an eliminator of the effects of faulty metabolism and uric acid, which has been proven to be such a factor in the sequelæ of rheumatism, if not its cause; its antiseptic properties, and a certain specific effect on the function of the liver, are generally admitted by the medical world. One great objection to its use heretofore has been its intolerance by the stomach and its depressing effect upon the nerve-centers that control the heart's action, when synthetically produced from carbolic acid. This fact has militated against its use, and various attempts have been made by chemists to modify this quality of salicylic acid without destroying its therapeutic properties. This they have succeeded in doing by a process of acetylization, where by the introduction of new elements and the transforming of the elements that constitute the original composition, a new compound was produced which not only maintained the properties accorded to salicylic acid, but new properties, due to the association of formaldehyde were acquired.

The following are a few of the many instances in which acetyl-forma-sal was used:

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Case of Miss W.—Age, 52 years. Chronic rheumatism, with history of frequent acute attacks, for years past; great pain, fever, and pronounced swellings of the hands and wrists. The salicylates and iodides not well borne by the stomach, and lithia and alkalies too slow for relief. Employed acetyl-forma-sal in 10-grain doses every two hours and obtained decided relief in twenty-four hours; in forty-eight hours the swelling subsided and pain nearly gone.

Case of Miss D.—Age, 36 years. Chronic sciatica. Gave 10-grain doses every two hours. In six doses found great relief; with an occasional 10 grains subsequently, was enabled to move about with more ease and comfort.

Being a sufferer myself from occasional attacks of rheumatism, both articular and muscular, which suddenly developed into a severe attack of lumbago, prostrating me and rendering me absolutely helpless (every motion being quite difficult without help, eliciting severe pains, and constant pain when not in action), took 10 grains of acetyl-forma-sal every hour for two or three doses, than every two hours for twenty-four hours, after which every three hours until trouble was completely removed. Found considerable ease after twenty-four hours, was able to move about unassisted in forty-eight hours, and in four days completely relieved, and attending to my usual work. Took no other medicine during such time.

Have found it of service in other cases of rheumatoid arthritis, myalgias, and uric acid headaches, by use of 5-grain doses every hour for twenty-four to forty-eight hours.

In conclusion, would assert that among all the many cases where I have used it, I never noticed one instance of its disagreeing with the stomach or depressing the heart's action.—The Medical Bulletin.

BUTTERMILK.

Buttermilk as a remedial agent cannot be praised too highly. The lactic acid, the sour of the buttermilk, attacks and dissolves every sort of earthy deposit in the blood-vessels. Thus it keeps the veins and arteries so supple and free running there can be no clogging up; hence no deposit of irritating calcareous matter around the joints, nor of poisonous waste in the muscles. It is the stiffening and harrowing of the blood-vessels which bring on senile decay Buttermilk is likely to postpone it ten or twenty years if freely drunk A quart a day should be the minimum, the maximum according to taste and opportunity. Inasmuch as gouty difficulties usually arise from sluggish excretion, buttermilk is a blessing to all gouty subjects. It gently stimulates all the excretories—liver, skin, and kidneys. It also tones the stomach and furnishes it the material from which to make rich, red, healthy blood. If troubled with gout avoid meat, sweets, pastry, wines, spices, hot rolls, bread of all sorts, and everything belonging to the tribe of ferments. Eggs, game, fresh fruit, vegetables, especially salads, may be eaten with impunity. If any one has a creaky joint or a swollen and aching one, he should drink all the buttermilk he can relish whenever and wherever he can, but it should be fresh churned and wholesome.

SEA WATER

Sea water is acknowledged by all medical authorities to be strengthening and beneficial where it agrees. In some instances bathing in the open air disagrees, and if this is found to be so, it should be discouraged. When children are afraid of the sea, and are greatly terrified by being put in the water, bathing them in the open sea is apt to cause disturbance to the system, and more harm than good is the result. In the summer months one often sees at the sea-side many poor children enduring the infliction of a course of sea bathing, their parents being under the mistaken impression that they are being strengthened thereby.

BATHING THE BABY.

Children differ greatly in the manner in which they react after a bath. It is a good plan for the physician to see for himself the effects of the bath upon the child, and to advise accordingly. If the infant be stimulated by its bath no change need be made, but if depression be caused, as shown by blueness of the hands and feet or by subnormal temperature, the bath should be made hotter and the duration shortened until the proper combination is secured.

CASES OF HEAD INJURY WITH OPERATION.

By H. Stuart MacLean, M. D.

Cases of head injury are of special interest because of (a) the attendant difficulties in differential diagnosis; (b) the slow development of sequelæ in many instances; (c) the fact that the diagnosis is frequently dependent upon peripheral demonstrations far removed from the seat of the trouble, combined with a complex array of symptoms referable to a variety of causes.

Brain lesions may de considered under the heads of "Concussions," "Contusion" and "Compression."

Cerebral concussion has been the source of much study and many diversified opinions. It is characterized by an unconscious condition varying in severity—a condition which directs attention to a widespread involvement in the cerebral cortex, where are located the various conscious centres. It yet remains to reconcile such an involvement with the usual scarcity of post-mortem findings in many of these cases. The symptome have been explained as due to the effect of a more or less violent vibratory motion of the brain. The experiments of Koch and Filchne have demonstrated that the symptoms of concussion may be produced by rapid slight blows as well as by single violent blow, and this leads to the conclusion that the effect is one of derangement in functionation rather than injury to or dissociation of the cells.

Where so many different opinions seem to hold with reference to the actual conditions existing in concussion, it usually transpires that there are more than one etiological factors, and in one case reported below (Mrs, M.) I met with a condition which I believe might be considered as offering a reasonable explanation for some cases of concussion. After opening the dura, a copious, rhythmical flow of clear, strawcolored fluid occurred. The quantity probably reached six drachms during the operation and continued for some time through the drainage. In this case there existed, among other injuries, a slight depression and, as the patient was unconscious, trephining was done. No pressure from bone was found and there was absolutely no hemorrhage. The pulsation of the brain was noticeable, as was the intermittent expulsion of the serous fluid from the wound. This edematous condition must have been due to some local vasomotor disturbance favoring transudation of serum, with the consequent pressure effects. Had there been no other injuries requirng operation, I am inclined to believe the cerebral effects would have passed off in the way they frequently do in concussion.

Concussion may be defined as a psychological condition or brain shock, analogous in a sense to the peripheral and central nervous symptoms following shock from fright or accidents of various descriptions. Essentially, a true case of concussion carries with it no gross lesion When there exists any tangible lesion, as punctate hemorrhage, softening, or separation of the cortex from the white matter, it has passed into the class of contusions.

Contusions of the brain may be very extensive without giving rise to decided symptoms. In it we always have a greater or less amount of laceration of the brain substance, with the attendant capillary hemorrhage and the natural steps of exudation; and effort at repair or regeneration in such cases may result in long continuance of the symptoms and even serious permanent defects. The possibilities of serious effects are greater in contusion than in compression.

It should always be borne in mind that in fracture of the skull with depression of bone the symptoms may be due to laceration of brain substance and not to pressure effects. This would explain why in some cases operation gives immediate relief and in others relief comes slowly if at all.

Localization is not always possible in contusion of the brain with fracture of the skull, as the force producing the injury when it has passed the skull and reached the brain, is transmitted in all directions. In this way large areas of the brain may show damage; as, for instance, extensive laceration with accompanying hemorrhage, when a mixture of blood, serum and barin substance will flow from the wound in the form of a thick, grumous fluid. It is probable that the difference in density of the gray and white matter of the brain predisposes to laceration at the point of junction of the two in cases of violence, the vibratory waves lasting longer in the one than in the other.

Cases of compression constitute the largest portion of brain injuries and usually present a symptom-complex which admits of fairly accurate differential diagnosis, especially when there is a history of head injury. Free blood in various stages of coagulation and fragments of bone constitute the foreign substances responsible for the compression. The capacity of the skull is fixed, as is the quantity of its brain contents, and this proportion can be varied only by reduction in the amount of blood or withdrawal of the cerebro spinal fluid. In traumatic compressions, the foreign substance encroaches upon the brain, which is congested and edematous (wet) from the associated irritation; hence the pressure symptoms appear more quickly than in the case of a slowly developing tumor or abscess, where the brain can in a measure accommodate itself to the increasing pressure by constriction of the vessels and shifting or absorption of the cerebro-spinal fluid.

During the present year, I have had nine cases of head injury requiring operation on the brain. These cases have all been of considerable interest in presenting either new conditons or unusual complications, but, for the sake of brevity, only five will be described.

Six of the cases had external wounds, eight had fracture of the skull, seven had clots, extra and sub-dural. Five were operated upon within a few hours after the injury, one was operated upon twenty-four hours after the injury, one two days afterwards, and two four days after. Of the nine cases, eight made uneventful recoveries and, so far as they can be traced, are perfectly well now.

The treatment has been to open the skull with a three-eighth inch trephine, enlarging the opening as required with a de Vilbiss forceps, which has entirely supplanted the large-bore trephine in my hands. Openings measuring, roughly, three-fourths by one and a half inches have been made quickly and smoothly with this very handy instrument. Drainage is freely used—either small rubber tubing or tightly twisted strands of silkworm gut, packing the bone opening tightly with gauze. No foreign body has been used to replace or stimulate regeneration of bone in the closing of these wounds, the only procedure being to draw the periosteum as far over the opening as possible, allowing it to fall in on the dura mater. It has happened that the nine cases I have had this year have been young people, and my experience has been that there is considerable regeneration of bone under these circumstances.

I have not had much experience with the use of foreign bodies for replacement, but am theoretically prejudiced against their use and, should the occasion arise for filling a large opening, I intend to do it by transplanting a piece of the outer table, with its periosteal covering, adjacent to the wound.

These cases—and, in fact, all the brain cases I have had in the last few years—have impressed me with the remarkable tolerance of the organ to operative work and the comparative rarity of infection. All these cases were freely drained, the drainage being removed in about thirty-six hours and the wound dressed in a routine manner; yet in but one (the last reported) has there been a suspicion of infection. So strongly has this been impressed upon me that I am inclined to advise trephining in place of lumbar puncture in cases of cerebro-spinal meningitis when decompression is indicated. I would certainly prefer a small trephine opening in meningitis cases where the symptoms pointed to a preponderance of the cerebral involvement.

Cases II.—M. J., age 25, colored. Lacerated wound on back of head, with fracture of skull in upper portion of occipital bone one inch to right of the median line. The upper margin of the fracture was depressed one-fourth of an inch for a distance of three-fourths of an inch. Upon removing the depressed bone and incising the dura, about three teaspoonfuls of brain substance flowed from the wound. There was practically no hemorrhage and no clot. The case was drained with silkworm gut and left the hospital, perfectly well in three weeks.

Case V.—A. I., age 19, white. Was sent to me from Caroline county with the following history: He had been struck on the left side of the head by a falling limb while cutting lumber, receiving a considerable bruise, but no wound. Twenty-four hours later he developed a slow pulse with severe headache. I saw him two days later, when he had partial loss of motion of the right arm and leg, but no facial paralysis. Operation the next day revealed a stellate fracture of the outer table with splintering of the inner table. The dura was lacerated and an oval clot, very firm in consistence, was removed with difficulty. Pushed directly into the substance of the brain and imbedded for a distance of about a half-inch, was a spicule of bone about five-eighths of an inch long and three-eighths of an inch in width at the base. The edge of this piece of bone was located only after a search inaugurated because the piece was missed from the inner table. This case was drained for two days and healed up promptly, with a complete recovery from all the symptoms.

Case VI.—Mrs. M., age 22, white. Injured by being thrown down by a street car and dragged along under the fender for a considerable distance. She had the following injuries: Compound comminuted fracture of both bones of the left leg: lacerated wound of calf of right leg; compound Colles fracture of right wrist; extensive lacerations of back of left hand; punctured wound of right elbow joint; several cuts on the face, and three bad scalp wounds. Patient was unconscious when brought to the hospital, with a pulse of 68. She could not be roused; the response to peripheral stimulation was very sluggish and uncertain and the pupils were moderately contracted and unresponsive.

While dressing the wounds, it was discovered that there was a depressed fracture at the bottom of the wound above the right temple, and, as the depression was one fourth of an inch in depth, it was determined to trephine while the other dressings were being done. A three-eighths inch button of bone was removed and, upon incising the dura mater, a quantity of clear, straw-colored fluid poured out, flowing with rhythmical interruptions corresponding to the pulsations of the heart. There was no inter-cranial hemorrhage.

The wound was closed, except for a little gauze drainage in the bone opening, through which the serum continued to flow with surprising freedom.

This woman resumed consciousness very slowly, but at the end of two weeks she had entirely regained her mental faculties and the sensation in her limbs. Her convalescence was of course, delayed by her other injuries. I believe that so far as the cerebral trouble was concerned this woman simply had concussion and would have recovered from it without operation. Certainly, she had no apparent laceration or hemorrhage of the brain, and if her symptoms, as referable to the brain, were the result of concussion, then it is reasonable to assume that the extraordinary amount of serum found bore some causative relation to those symptoms. I believe the shock of the accident produced a vasomotor paralysis which favored the abnormal escape of serum and the symptoms resulted from the pressure incident thereto.

Case VIII.—J. P., age 16, colored. This boy was thrown from a wagon, striking on the top of his head. He seemed all right for twenty-four hours, except for headache and a pulse ranging from 60 to 70. Then he lost the power of speech. No other facial symptoms presented themselves except that at intervals he would have a momentary weakening of the muscles of the right side of the face and a deviation of the tongue slightly to the right side. This symptom was very transitory and I did not consider it sufficiently definite to determine the wisdom or site for an operation. Seventy-two hours after the accident, he was taken suddenly with violent convulsive seizures, which, as they relaxed, left partial paralysis of the right arm and leg. I had considered the advisability of trephining over the speech centre on the left side prior to these seizures, but had been deterred by reason of the conflicting symptoms occurring in the face; but upon development of the convulsions I made immediate preparations and trephined on the left side about one inch above and one-half inch in front of the left ear. There was no pulsation of the dura upon exposing it, and upon opening it the brain presented and protruded. A grooved director was passed directly into the cortex. At a depth of one-half inch a quantity of grumous, clotted blood rolled out alongside the instrument. Altogether about one drachm was expelled. This clot being found just above the fissure of Sylvius, I felt sure there was more trouble higher up; so I enlarged the opening in the bone up about three-fourths of an inch toward the median line, when I found a transverse fracture of the skull with a separation of about one-sixteenth of an inch, and both a sub-dural and extra-dural clot. From the amount of separation of the edges of bone, I estimated that the fracture must have been several inches in length, but, of course, did not endeavor to trace its extent. The extra dural clot was a small one about one inch in diameter and one fourth of an inch thick; but the sub-dural clot was a large one, about two inches in diameter and three-fourths of an inch in thickness. This clot was gradually wiped out, but in doing so profuse hemorrhage started from beneath the posterior margin of the bone at the point of fracture, which could be only temporarily controlled by packing. Believing that the hemorrhage was coming from the posterior branch of the middle meningeal artery, which had probably been ruptured by the fracture and thus produced the clots, and not wishing to remove more bone in order to get at and tie the vessel, I stripped the dura free from beneath the posterior portion of the bone opening and grasped it firmly in a long-jawed artery forceps, hoping to thus catch the ascending artery and check the hemorrhage. This expedient was successful and the further steps of the operation were completed, leaving the hemostatic in situ. The wound was well drained and dressings applied, leaving the handle of the clamp extending from the dressings to facilitate its early removal, which was done within twenty-four hours. Within fourteen hours the boy had regained consciousness and sensation and could answer questions in monosyllables, and in a little over a week was up and walking about, the wound having healed promptly.

This operation was performed about two months ago, and a few days ago I saw the boy, when he seemed perfectly well. As a large area of bone was removed, he has a space about an inch in diameter where the brain pulsation can be noticed, but this area has reduced almost one-half since he left the hospital.

Case IX.—R. B., age 20, colored. This man went to sleep on the side of the R. & P. track with his head resting on the rail, and it was struck by a car and rolled over by the pilot or wheel. Unfortunately, he had elected to put his head right over the plate used to bolt the rails together, and he had three deeply depressed fractures on the right side of his head, one about one-half inch below the outer angle of the right eyebrow, another above and a little in front of the right ear, and the third about two and one half inches further back and on a line with the first two, all corresponding to the bolt-heads in the plate.

These fractures were deeply depressed or punched in, in the most posterior one the outer table being forced in past the normal level of the inner, and all three badly ground full of grease and grit. He also had a longitudinal fracture on the top of the head, about three inches in length, extending through

the outer table, with much of the outer table gouged out, but without depression. In addition to the buttons of bone, over thirty pieces were removed form the fractures on the right side and the wounds well drained.

For three days the patient lay in a stupor with pulse ranging from 70 to 80, pupils reacting moderately and slight response to peripheral stimulation, with occasional spells of violent efforts to get out of bed. On the fourth day he showed signs of returning consciousness and began to speak in monosyllables, and by the end of a week could say a few words, ask for things he needed and gave every evidence of recovering. On the ninth day his temperature suddenly shot up to 104 degrees, pulse ran to 160, and then became too feeble and rapid to detect; respirations between 50 and 55, and he lapsed into a profound stupor. The wounds were dressed when this condition set in, but they were clean and practically healed, except the one on top of the head, which was discharging a little pus from a pocket under the scalp He died within eight hours.

I believe death was due to some form of acute cerebritis, or, possibly, an abscess at the base of the brain.—THE VIRGINIA MEDICAL SEMI-MONTHLY.

MALIGNANT DISEASES OF THE STOMACH, DIAGNOSIS IN EARLY STAGES.

BY DR. M. J. PAYNE, STAUNTON, VIRGINIA

In the diagnosis of malignant diseases of the stomach, abdominal surgery has imposed upon the internest, the general practitioners, new and important duties. First, the diagnosis must be made early, that is, before the appearance of a tumor hemorrhage or cachexia. Must be made accurately as to locations, whether at the pylorus, lesser curvature or cardia, whether localised or generalized, and whether complications exist or not. Hospital physicians, consulting physicians, specialists of stomach diseases, as a rule, do not see malignant diseases of the stomach in the early stage. Many cases do not consult any physician until the advance stage, treating themselves by some so-called stomach medicine or inert mineral water, and receiving no benefit, often harm; come to the physician after hemorrhage or cachexia have appeared. While many pass from one physician to another, receiving only a hurried examination and hasty advice, till the onset of the later symptoms or complications lead the physician to examine the stomach. In other words delay is made in the diagnosis until the classic picture is complete in every detail. A diagnosis made after the appearance of a tumor, hemorrhage and cachexia is of no more practical importance to the patient than a diagnosis made at the autopsy.

To my mind much would be gained by classing hemorrhage and cachexia as complications, rather than symptoms, for one may be forcibly struck with the importance usually ascribed to these two symptoms, when listening to long discussions in the consulting room, as to the probable benign nature of some tumor of the gastric regions not yet attainded by hemorrhage or cachexia. It seems that the average practitioner is very reluctant to make a diagnosis of malignancy of the stomach until hemorrhage and cachexia are present.

In point of frequency the stomach stands second to the uterus, and in the male first. The male appears also to be affected more often than the female. While no age is entirely exempt, it is more common after forty and increases rapidly after fifty. Race does not, as formerly thought, appear to confer any special immunity.

The symptoms of all malignant new growths of the stomach are substantially alike, therefore in the present paper no attempt will be made to differentiate clinically the several forms. While adeno-carcinoma is the more frequent form observed, sarcoma undoubtedly occurs. In examining the patient it will be observed that he is past forty—that till the present complaint he has been unusually well, and has not had any gastric complaint. He has been accustomed to eat any and everything, usually taken, and digest it. The history may reveal hereditary or association with a cancer case. Formerly the appetite has been good, now it is poor, or entirely lost. Anorexia (without an assignable cause) is a very important early symptom. There is disgust for food, principally meats. Articles of food formerly liked are now distasteful e.g., tobacco, wines, liquors, etc, have lost their tempting qualities. Coincident with the loss of appetite, loss of weight and loss of strength out of all proportion to the emaciation will be observed. Disgust for food is so marked that it is with difficulty that nourishment is given. On taking food a sense of fullness or bloating, amounting even to distress, is usually noticed, possibly eructations, and some slight nausea. Therefore, it is true that the onset is obscure, indefinite, the symptoms as related by the patient appear to him as trivial, there is no strikingly clear condition to account for the rapid decline in health, yet the very fact that the man is ill of some serious malady impresses itself upon the physician. It is this very point that demands one's attention. This somewhat typical onset is so slightly characteristic to the patient and his family that malignancy is not at first thought of, therefore I wish to emphasize the importance in just such cases, that the physician should think of malignant new growth of the stomach

and begin to observe the case from this point of view, till satisfied as to the proper diagnosis.

Two symptoms of special importance demands now some attention.

First Pain.—At first, or early pain is not a prominent symptom. Indeed, it may never reach so intense a degree as to warrant the use of opiates. Visceral cancer is not as painful as text books lead one to think. When present in the early stage it is described more as burning, reference being made somewhat definitely to the particular area of pain. As a rule pain is independent to taking food, and is often relieved by taking hot water, tea, coffee, etc., it, however, when attended by vomiting, is never relieved by the act of vomiting as in ulcerations. A peculiar symptom in some cases, and described by the more intelligent, is that of a grating sensation, as if the walls of the stomach were being rubbed together. Pain may at times be felt in the back especially when the lesser curvature is involved, but is not characteristic. Tenderness over the painful area has in my experience occurred in all cases. Nausea at irregular intervals appears early, and may or may not be attended by vomiting. Vomiting may be entirely absent throughout the entire course of the disease, even to the last, as for example: when the pylorus is unaffected. However, when present the act is frequent the food often being vomited unchanged and portions of food taken many hours previously may be vomited. The quantity expelled is often apparently greatly in excess of that taken, due to fermentation or putrefaction. Particles of the cancer tissue, blood and pus may likewise be found in the substance vomited Constipation is the rule, even in those previously not so affected.

Observe carefully the weight, preferably have the patient weighed in your presence. Keep a weight record.

Direct now that the patient remove the clothing, and it will be observed that the emaciation is more marked from the hip line upward, and that the trunk is more affected than the limbs. The subcutaneous fat is absorbed, the skin hangs in folds, and on pinching up a fold of the skin one may observe that the normal elasticity of the skin is greatly lessened or lost. The eyes are sunken, and the face often portrays an anxious, helpless expression. Depression of spirit, even to melancholia may be observed.

Examine now carefully the heart, lungs, and kidneys, and if found free of disease, a step of great importance in the diagnosis is made. Recall, however, that in the late stages of malignancy of the stomach albumen may be detected in the urine in large quantities; this should, however, not prove confusing. Next, and of great importance, is the inspection of the upper abdomen, taking care to have a good light and plenty of time. Observe carefully and compare the sides, watch closely for any fullness or undue prominence of either side, picture in your mind's eye the position of the stomach for often the outline of a tumor may be observed. Note carefully the left hypochondrium for any unusual prominence, any sudden prominence rising up from the surface. Kussmaul describes a peculiar relief or mound rising suddenly and prominently from the level of the abdomen, and after a brief time sinking again to a position of rest. This is spoken of as peristaltic unrest of the stomach. Boas, however, describes the phenomena as a tonic contraction of the stomach which is localized. If the prominence be grasped with the hands when at its height a hard contracted mass, resembling the uterus, during the pain is observed. To this Boas applies the name—gastric rigidity. Fifty years ago Cruveilhier described this sign, and emphasized it as an early major diagnostic point. Pain and gurgling may attend the contraction. Gastric rigidity indicates an obstruction to the pyloric outlet. If a tumor be present it becomes more prominent during this contraction.

By auscultation of the gastric area, detect the presence of any new sound, gurgling or splashing, as a further evidence of the pyloric obstruction.

Determine now by palpation and percussion the area of the liver and spleen, observe if present any tender points and tender area, likewise observe the association of tender points and painful area. In palpating it is preferable first to have the stomach empty, and if possible determine the stomach area: may indicate this by pencil mark. Now distend the stomach and define borders as accurately as possible. Use preferably gas distentions. Observe whether the stomach is dilated or contracted, and determine if there is displacement of the viscus. In all cases of pyloric obstruction the stomach is actually dilated at first—however, in cancer of the cardia, lesser curvature, and œsophagus the viscus may be actually contracted, that is, after infiltration of the stomach walls. Determine now the digestive efficiency, that is, whether or not the food is digested within the normal time. If the stomach contains food after seven hours there is inefficient digestive functions. Likewise observe if there is motor insufficiency.

The only practical way to determine this is by stomach washing, the technic of which does not enter into this paper. However, if particles of food be vomited, or removed by the stomach washing, from eight to twelve hours after eating, both digestive and motor functions are insufficient.

Let the stomach contents be tested now for free or uncombined hydrochloric acid. This test is now regarded as less positive than formerly? The free acid may be present in cancer, (rarely) and absent in conditions other than cancer. The absence of free hydrochloric acid with the presence of lactic acid and the Oppler bacillus is held to be more indicative of malignancy than the simple absence of free hydrochloric acid. If found that lactic acid is being generated in large quantities this alone is more conclusive. (Found in about 83 per cent. of all cases). The absence of hydrochloric acid and the presence of lactic acid is a condition when found early in the process of cancer of the stomach is of great importance, as will be presently understood. If the diagnosis is yet delayed the appearance of a tumor will admit of no further doubt as to the diagnosis but all must now accept the statement that the early stage has passed. There is but little practical benefit to the patient to advise operative interference after the tumor is found. I was never more forcibly struck with the importance of this, than on recently discovering cancer of the stomach with a tumor, in a patient at his first visit to my office. I advised operation, to which he readily assented, and on opening the abdomen the entire stomach wall was seen to be involved, and the condition of affairs so extensive as to render any radical treatment not only useless but impracticable. It is likewise useless to advise operative interference after the advent of hemorrhage, as the appearance of this symptom in my experience is shortly followed by death. To advise operative procedure after cachexia has appeared is only to hasten the inevitable. I make reference to these symptoms only to emphasize that the usual classic symptoms enumerated in the text books are indicative only of the late—the hopeless stage.

In hope of stimulating the efforts of practitioners, not the specialist, I wish now to add that should a patient past forty come to consult you, and relate that he has been well till the present illness, that in obtaining the history you find an indefinite onset, a loss of appetite, a disgust for food, a distaste for meets, tobacco and liquor, great emaciation, and lost strength, that both the digestive and motor functions of the stomach are insufficient, that nausea, constipation and irregular inexplainable vomiting are present, that he complains of burning or indistinct pain unassociated with taking food, and you find on examination a tender point referable to the area of the pain, that on distending the stomach there is no marked dilatation, that the gastric condition is growing steadily worse, the heart, lungs and kidneys are found to be normal, and yet the patient appears as if he is a victim of some serious malady. I claim now that if ulceration, chronic gastritis and amyloid degeneration be excluded, a diagnosis of malignant disease of the stomach should be made.

Exclude ulcer by recalling that both the digestive and motor functions are normal, or even increased, that is digestion goes on more rapidly—the food is digested and the stomach empty within two hours. Free hydrochloric acid is normal or in excess. Pain is greater, more acute, and hemorrhages which is often alarming, recurs less frequently than in cancer, and improvement shortly takes place. Lost appetite does not occur with such frequency as in cancer, and the weight and strength are likewise not so markedly affected.

Exclude chronic gastritis, and only the graver forms are apt to be confusing, by the fact that the absence of free hydrochloric acid is early noted in cancer, and very late in chronic gastritis. That an inhibition of, or an inefficient digestive function appears early in carcinoma and late in chronic gastritis. Chronic gastritis never leads to complete loss of digestive functions, the reverse being true in malignant disease of the stomach. There is never cardialgia, or hemorrhage, never distinct or tender points in gastritis, the area of tenderness being diffused. In chronic gastritis the vomit or stomach washings show large quantities of mucus. The history of long standing dyspepsia, the absence of lactic acid and the Oppler bacillus, and the less striking blood changes are likewise indicative of chronic gastritis.

Exclude amyloid degeneration of the mucous membrane, (rare) by the fact that it is always secondary to tuberculosis, syphilis or prolonged suppuration.

Further, recall that malignant disease of the stomach does not pursue an extended course, for a case existing more than a year or a year and a half may safely be classed as non-malignant. I have not made reference to any metastatic changes in the liver, to glandular enlargement either of the left supra-clavicular glands, or the peri or para-umbilical glands, or to ascites, for any or all of these symptoms are indicative of the late stage.

While little may be promised except a somewhat extended life in the early stage, all operative work in the later stage but hastens the inevitable end. As a matter of interest and importance, likewise to stimulate early diagnosis, a partial gastrectomy, though showing a slightly higher immediate death rate, is attended in those cases recovering by a somewhat longer period of life, than the more commonly practiced gastro-enterostomy.—THE CHARLOTTE MEDICAL JOURNAL.

SOME PRACTICAL SUGGESTIONS ESSENTIAL TO THE RADICAL CURE OF HERNIAE

By Irving S. Haynes, M. D.

A hernia is a source of constant irritation; at times a very painful condition; and always a menace to life.

Its retention by a truss is uncertain and its cure after the fourth year by this means practically impossible.

The individual who wears a truss endures many discomforts, often positive suffering, and his life may be forfeited when far from aid by the failure of his truss and the accidental strangulation of the intestine.

The radical cure then of any hernia is not only a desideratum, but it is also often imperative.

I do not intend to rehearse the various methods all which from time to time have appeared for the cure of herniæ—they are legion—but to emphasize some, perhaps well known, but, nevertheless, important factors which my study of anatomy and practice in surgery have shown to have a strong basis and are absolutely essential to success.

I shall not discuss the causes producing herniæ, the many variations under which they appear, the symptoms, nor the diagnoses of these conditions, but will briefly consider some particular features necessary to the repair of the weakened abdominal walls which is demanded by the presence of some one of the common varieties of rupture, viz.: inguinal, femoral, umbilical and post-operative herniæ.

The essential features of any operation to my mind depend for their value entirely, not upon the fancy of the operator, but upon the one great principle that determines success or failure. The fundamental principle in the cure of herniæ is the restoration or reconstruction of the parts according to nature's plan. Any operation which does not reform the region after Nature's model will prove inefficient, but, if her architecture is closely imitated, success follows in the majority of cases.

Inguinal Hernia.

In the treatment of this variety of rupture the imagination of many operators has had full play, and many and wonderful are the methods proposed and even put in practice. In most of them Nature has been apparently forgotten and the normal construction ignored.

In this region, more than in any other, is it necessary to reconstruct the parts after the normal plan. I might give you an outline of the relations existing in the normal person, but will forgo this and trust to your remembrance of the construction of this region.

I shall suppose that the operation has been carried out to the stage where the hernial sac has been emptied of its contents and you are ready to begin closure of the wound.

Many plans have been suggested for the disposition of the sac, but there is only one worthy of use. The plan of quilting the sac, forming a pad, and by this plugging the internal ring is illogical and inefficient.

Either this excess of tissue will be absorbed, or it will remain. If it is absorbed, no good has been accomplished by its retention, and if it remains, it will act as a wedge to reopen the ring and favor the recurrence of the hernia.

Side-tracking the sac upward, or sideways, accomplishes nothing, and this portion of the serous membrane may be the starting point for a cyst.

There is only one rational way to deal with the sac—freely loosen its neck, firmly draw it down, ligate it as high up as possible, and cut away the part below the ligature. This will accomplish all the benefit to be derived from this factor, inasmuch as you have obliterated the funnel leading into the sac.

Next deal with the cord: proper treatment of the cord is essential to success, as a large varicose cord will negative your treatment of the muscles. Remove all the excess of venous, connective and muscular tissue as advised by Halstead, leave only the vas with its immediate vessels, thus changing a large vascular mass into a thin, firm, cord. The excess of tissue is removed from well inside the abdomen to beyond the site of the external ring.

Now we come to the plan of suturing the muscles; this I call the normal plan, and it is best exemplified in the Bassini operation.

In the normal state there are two inguinal rings and yet no hernia. Why? Because these rings or openings for the passage of the cord are not opposite each other but removed for a distance of an inch and one-half or more, and each is reinforced by a strong aponeurotic layer. In a hernia we find both rings opposite each other. The conclusion is obvious; we must separate the rings. The external one is fixed by its proximity to the pubes; therefore we can only change the position of the internal. This is easily accomplished in this wise. Divide the fibres of the internal oblique and transversalis muscles outward along Poupart's ligament until over the middle of the same. Form the internal ring here by drawing the cord outward and fixing it there by a suture, through the divided muscles and Poupart's ligament, just internal to the cord. The size of the internal ring depends upon the placement of this suture. If too large a gap is left about the cord, the hernia may return; if too small, the cord may be con-

stricted. However, as we are dealing with muscular tissue that will yield to some extent, it is safe to close the muscles quite snugly about the cord.

Before finishing the coaptation of the internal oblique and transversalis muscles and Poupart's ligament, be sure that you have thoroughly exposed the margins of these muscles, the conjoined tendon and the ligament, especially near the pubic bone. Bits of cremaster, shreds of connective tissue left here may get between the sutured structures and a weak union result. Use No. 3, 40 day chromic gut for adults, and No. 1 or 2 for children. The sutures are placed one-half inch apart, and introduced through muscles and ligament after the manner of Lembert sutures of the intestines; thus rolling together broad surfaces for union. Mattrass sutures can also be used.

Place the cord along the sutured line and over it close the external oblique by continuous or interrupted chromic gut sutures.

Do not bring the cord out through the external oblique opposite the internal ring. This is illogical, as the rings are thus placed opposite to each other and a return of the hernia invited. Besides there are valid objections to having the cord in such a superficial position in a region so frequently exposed to traumatism.

One point about suturing the external oblique. Often you will see a gap between the fibres of the aponeurosis extending outward often as far as the iliac spine. If such a break exists strip up the superficial structures and close it by your sutures. At the pubes you must form the external ring as small as possible, remembering, however, that here you are suturing inelastic fascia, and too tight a ring means obstruction to the circulation of the testicle. Suture the skin without drainage after absolute hemostasis.

An operation of this kind means in the great majority of cases a permanent cure. I have used this method in an infant four (4) weeks old, and in a man eighty (80) years of age, and at all ages between. By the way, the baby recovered and remained cured; the old man died of pneumonia two weeks after the operation. The wound, however, had healed by primary union.

Femoral Hernia.

Operations for the cure of femoral hernia have kept pace in complexity and variety with those suggested for inguinal hernia.

But I fully agree with Ochsner and Coley that the complicated methods have nothing to recommend them; in fact they are followed by a greater percentage of recurrences than after the simpler operation. Suppose again that the femoral sac has been exposed, opened and its contents dealt with. Dispose of it in exactly the same way as advocated for the sac in inguinal hernia, and for exactly the same reasons. Close the femoral opening by a purse string or interrupted sutures that firmly unite the end of Poupart's ligament to the pectineal fascia immediately over the pubic bone, and from Gimbernat's ligament outward to the femoral vein.

This method is curative; in fact it is more effective than any of the numerous plans offered for raising fascial and even bone flaps, transplanting the insertion of Poupart's ligament, etc. It really seems as if many surgeons had devised some particular scheme without any regard for the anatomical construction of this region in order that they might tag the operation with their own name, and thus erect a monument to themselves.

Umbilical Hernia.

Umbilical hernia of whatever variety and however long standing possess this feature in common: they are easiest treated by full exposure of the neck of the hernia in its entire circumference before opening into the sac. The sac should be opened preferably near the base, or ring, rather than over its most prominent part. After dealing with the contents of the sac, which is often most trying you will face many difficulties in the next step, namely, closure of the orifice. The peritoneum separates not at all, or with great difficulty, from the fibrous ring. Do not waste time here, but incise the linea alba upward and downward until you strike the line of cleavage, when you can peel the peritoneum up to the hernial orifice; close the peritoneum and the hernial orifice by separate lines of sutures, the latter with No. 3 or 4, 40 day chromic gut. If the peritoneum does not separate readily even with an enlarged incision, proceed to open the sheaths of the recti muscles. Form one flap with adherent peritoneum behind and the other flap cut of the anterior layer of the sheaths in front, and suture the two layers independently. Before closing the external flap, bring the two recti-muscles together with a few interrupted stitches.

This procedure of forming and suturing three layers separately, that is the posterior sheaths of the recti and peritoneum as one layer, the recti muscles as the second, and the external sheaths as the third layer, is also useful in closing the gap so often found when the recti muscles have become widely separated from each other through stretching and thinning of the linea alba. I used this scheme with perfect success in such a case where the incision extended from the ensiform ap-

pendix to the pubes. The width of the linea alba at the point of greatest separation of the recti muscles was about four inches.

Post-operative Hernia.

You might truthfully say that the cure of this undesirable condition is in the primary treatment of the original wound by careful layer suturing. I grant it. But at times, for one reason or another, this is impossible, and hernise do follow abdominal operations, and we are called upon to repair such defects. All these cases are difficult, some more so than others, depending upon conditions I shall not discuss now.

One essential feature of the operation for the cure of this form of rupture decides the ease with which it can be done, and often the permanency of the result. You must aim to remove all cicatricial tissue, expose the various layers, and accurately suture each layer separately. This sounds easy and it may be made comparatively so, if this precaution is observed viz., enter upon the operation at a distance from the old scar and the rupture, in normal healthy tissue, whether the skin, muscle, aponeurosis, fascia or peritoneum; expose the region freely and separate each layer up to the cicatricial ring forming the margins of the opening, but do not include any of this scar tissue with the several layers; scar tissue does not offer firm ground for suturing; it will yield and spoil the result. Having formed the various layers, open the peritoneum close to the sac; usually omentum, or intestine, or both are adherent to it. Omentum can be ligated, intestine has to be dealt with so as not to leave a raw surface. I have found it possible to twist back the margins of the piece of adherent sac, suture them, and thus present a serous surface covering the intestine.

Close the various layers, by plain gut for the peritoneum, chronic Nos. 2, 3 or 4, 40 day gut for the muscles, and suture the skin, or close the wound, by sterilized adhesive plaster.

The point I have omitted in the brief survey of hernia I hope you will bring up in the discussion. As I stated in the beginning, I have attempted to emphasize some of the factors that to my mind are most important in determining our success in the operative treatment in this most interesting class of cases.—The New York State Journal of Medicine.

THE TREATMENT OF HYPERTROPHY OF THE PROSTATE.

By Eugene Fuller, M.D.

Prostatic hypertrophy—that term being used in its proper sense and applied to the non-inflammatory senile condition—requires in itself no treatment, for the gland so involved is not primarily tender nor painful. If prostatic hypertrophy happens to extend in such a way as not to obstruct urination, the individual so affected is apt to harbor the pathological condition without being made aware of the fact. Consequently the treatment of prostatic hypertrophy really means therapeutic or surgical measures, the object of which is either to counteract the effects produced by faulty urine drainage or else to remove the obstruction to drainage. Therapeutic measures in cases of uncomplicated obstruction to urination are of minor importance. Where, however, only a moderate degree of obstruction normally exists, superadded to which there has occurred an inflammatory state of the gland due to an acute infection, then therapeutic agencies, skilfully applied, may so relieve a patient as to lead him falsely to believe a complete cure has been thereby attained. What can be accomplished by catheterization in cases in which the obstruction to urination is marked or complete I will not here dwell upon, not that I feel that the catheter has not still an important place, but because being the old and time-honored treatment it is or should be familiar to all. I will say, however, that the use of the catheter in this connection is very often greatly abused. By that I mean the instrument is still commonly employed to serve simply as a means of allowing so much procrastination and delay in cases really demanding prompt and radical surgery that the patient needlessly dies either without being offered the benefit of radical operation, or else after such an operation too long delayed.

Before taking up the question of the surgical removal of prostatic obstruction it is of the greatest importanc that the surgeon should be thoroughly alive to the pathological changes in the upper urinary tract which result from the presence of such obstruction. The mortality connected with prostatic obstruction results from these secondary pathological changes rather than directly from the obstruction itself. Where, as is usually the case, prostatic obstruction develops slowly a compensatory muscular hypertrophy of the bladder wall at first results, which for a time may be sufficient to keep abreast of the developing obstruction. But eventually, as the obstruction gets the better of the hypertrophy, vesical sacculation results, and in advanced instances of the latter condition the sacculi may become so extensive as to represent hernial pouches where the vesical mucous membrane has slipped through the meshwork of muscular fiber. As the walls of such pouches are generally made up simply of mucous membrane and peritoneum, their structure tends easily to rupture, thus giving a vent to the vesical contents into the peritoneal cavity. Not infrequently such sacculi form nidi wherein triple phosphatic calculi develop. Where prostatic obs-

truction forms rapidly there may be little or no tendency shown toward the development of vesical muscular hyperplasia, the bladder wall simply becoming very attenuated and atonic. In such a condition the bladder wall loses all contractile power. It is not alone the bladder wall which suffers from prostatic obstruction, but also the ureters, the renal pelvis and the kidneys themselves. Where obstruction is of long standing and severe the vesico-ureteral orifices become so patulous as to admit the tip of the index-finger, and to a less or perhaps equal degree the ureteral canal becomes distended. In such cases a marked degree of hydronephrosis ensues and the renal parenchyma becomes stretched, attenuated, and to an extent interstitially involved. These are the changes due to urinary obstruction, but in most instances added to these are found the secondary inflammatory lesions due to infection which the condition of urinary stagnation has invited.

When a surgeon encounters a case of prostatic obstruction complicated by severe secondary lesions of the upper urinary tract and decides on radical surgery, he makes a grave mistake if he takes into consideration only the operative removal of the prostatic obstruction, neglecting or overlooking the urinary resulting lesions. It is owing to this over-sight many times that one hears of death a week or so after the removal of prostatic obstruction in cases wherein everything immediately after the operation seemed to do so well that the most optimistic reports were given out. If one reads the literature of the day on prostatic surgery, and it is voluminous, he will find that it almost wholly deals simply with the one problem, namely, that of removal of the hypertrophy. Most writers also have some one method of operative procedure which is made to do service in all cases. Suppose, for instance, a case presents itself wherein following a long standing prostatic obstruction the secondary changes of the upper urinary tract already described exists, together with infection. What is to be done to prevent the patient from suddenly and quietly dying a week or two after the prostatic obstruction has been removed, supposedly so successfully; Such deaths are generally due to the combined agencies of uremia and septicemia. The answer to the question is the establishment of the freest possible vesical drainage and the maximum diuresis. Where vesical drainage is not free vesical tenesmus and spasm persists after operation, a most undesirable and dangerous symptom, since such a state of the bladder causes a reflux of bacteria-laden discharge from the bladder up the patulous ureters to the renal pelves, thereby increasing the bacillary nephritis and consequently the uremia. The tenesmus also has a very injurious effect on the seat of the operation, as it tends strongly to cause germ absorption at that point. The establishment of marked diuresis in the presence of vesical tenesmus in such cases is impossible, due presumably to the countervailing effect of the urinary reflux.

Aside from the question of avoiding death soon after operation in cases in which the resulting lesions of the upper urinary tract are severe, the surgeon should strive to attain a prompt cure, or at least a marked amelioration of those lesions coincident with convalescence from the operation for the removal of the prostatic obstruction, for if he does not the patient will leave the hospital perhaps with a partially crippled condition of the urinary function still persisting, perhaps with urine rendered putrid by the foci of decomposition lodged in the uncured vesical sacculi, or else with a pyelitis and a bacillary nephritis still in evidence. Cases such as these, provided the prostatic obstruction has been thoroughly removed, may and frequently do after many months of bodily weakness gradually get entirely well, a recovery of the lesions of the upper urinary tract having gradually taken place. I consider, however, that such patients have been exposed to needless risk, since not a few of them do not so recover, but die after a few, or it may be many, months of some septic or uremic complication. In all these cases complete vesical rest, which is really but another way of stating the freest possible vesical drainage, will avoid these dangers and speedily cure these lesions, provided it is maintained for a period long enough for a marked degree of repair to take place, so that the patient leaves the hospital convalescent from his resulting urinary lesions as well as from his prostatic operation.

There is a postoperative complication which may, and not so very infrequently does, occur to seriously, perhaps, complicate cases wherein at the time of operation the freest possible vesical drainage has not been provided, and that is intravesical hemorrhage. Every surgeon knows that severe intravesical hemorrhage is the accidental cause for an emergency operation many times in the cases of prostatics who have for a long time staved off operation through the constant employment of the catheter. I have never in my experience known of a postoperative hemorrhage in this connection which has proved serious, provided at the time of operation suprapubic vesical drainage had been established and maintained. For suppose such an accident does occur after an operation so performed: a blood-clot will fill up the space from which the prostate was removed, the fundus of the bladder, and possibly the bladder cavity. It cannot, however, cause even in an extreme instance any special distention of the vesical cavity owing to the suprapubic vent hole. After such bleeding has occurred the blood-clot itself, there being no vesical tenesmus provoked to dislodge it, acts as a natural tampon

and stops further bleeding. The urine, while the blood-clot is in place, flows out passively at the suprapubic vent. Such a blood-clot should never be tampered with or hastily removed. After it has served its purpose of a tampon it will come away by natural disintegration through the suprapubic vent. Where there is no suprapubic vent the packing of a blood clot at the vesical neck and fundus instead of serving a beneficial purpose causes a most grave complication, since urine collecting behind it produces over-distention of the bladder a complication which must be speedily relieved. If a bladder be atonic or sacculated, having no expulsive force, it may be and often is impossible to remove the clot and establish vesical drainage without then resorting to suprapubic cystotomy as a secondary emergency operation.

I have in mind an interesting instance wherein following a perineal prostatectomy a patient died three weeks after such a hemorrhage, and indirectly from it, as the post-mortem showed. In this case a cystoscopic examination before operation showed great sacculation of the bladder and marked dilatation of the ureteral orifices. I did not from this showing consider the case a good one for perineal prostatectomy. The patient, however, positively refused to take a general anesthetic, electing spinal cocaine anesthesia. I accordingly performed perineal prostatectomy, and easily removed the prostatic obstruction. Six hours after operation some intravesical hemorrhage occurred which excited violent tenesmus. The house surgeon removed the perineal drainage-tube, and after considerable extraction work with forceps and some aspiration through the tube extracted the vesical clot sufficiently to re-establish drainage. The case then did fairly well for a week, after which uremic and slight septic symptoms developed, together with tenderness over the right kidney. These symptoms gradually increased. The patient refused a right-sided nephrotomy, and died three weeks after the prostatic operation. The post-mortem showed both ureters much dilated and the renal pelvis hydronephrosed. The right ureter, however, and the right renal pelvis were found full of an old blood-clot. In the renal pelvis active inflammatory changes had been provoked by the presence of the clot. Such secondary changes were also present to a less degree in connection with the interior of the ureter. There had been no previous history of renal or other hemorrhage in this case, and from the apparent age of the clot, together with the clinical history and symptoms, it seemed evident that the clot was from a vesical reflux of blood which took place during the severe tenesmus at the time of the hemorrhage. Had there been a suprapubic vesical vent such a reflux could not have occurred.

After a consideration of the preceding remarks it is easy for one to see my reason for favoring suprapubic prostatectomy in a large percentage of cases, exclusive entirely of the question of the surgical accomplishment of the removal of the hypertrophy. As far as the removal itself is concerned it makes little personal difference to me whether I employ the perineal or the suprapubic route, as I rarely experience difficulty in accomplishing my purpose, whichever way elected. Sometimes in very difficult cases, and especially in those in which the hypertrophy to be removed is of a malignant nature, requiring consequently much careful manipulation to effect its detachment, I make use of a combination of suprapubic and of perineal prostatectomy. On numerous occasions after completing a perineal prostatectomy, and being then doubtful whether the drainage offered by that operation would prove sufficient for the conditions existing in the upper urinary tract, I have as a matter of safety and precaution made a suprapubic vesical vent.

In cases of prostatic obstruction in which the upper urinary tract has suffered little from secondary resulting changes, and especially when the bladder wall still retains a marked expulsive force, I think well of and generally prefer the operation of perineal prostatectomy. I might almost say, in other words, that perineal prostatectomy is my choice in the class of cases which represent the best surgical risks, while the suprapubic operation is my choice in cases representing greater surgical risk. Writing at this date I can almost afford to pass the Bottini operation without mention. Those who had much to say for it just a few years ago have little or perhaps nothing to say for it now, while the few enthusiastic articles at present appearing in its favor are mostly from the pens of those new in the field. This operation, like that of electrolysis for stricture, is apt to lie quiet the better part of a medical generation, and then burst forth again in a somewhat modified form, perhaps, much as does an inactive volcano.

My operative technique in suprapubic prostatectomy is fairly well known. It was first published in the Journal of Cutaneous and Genito-Urinary Diseases, New York, June, 1895, and my last article on it appeared in the Annals of Surgery for April, 1905, shortly prior to the appearance of which Freyer had tried to claim the operation as his own. In perineal prostatectomy my technique is quite similar to that of Goodfellow.

Prostatectomy in skilled hands is an operation attended by small mortality. Provided there is no marked general dyscrasia, and provided the secondary lesions of the upper urinary tract are not severe, the mortality risk ought not to be over, and ought probably to be under, 3 per cent. With careful postoperative supervision and with the maintenance of free urinary drainage not more than a 1½ per cent extra risk on the average ought

to be added to the severer class of cases. Most patients seeking advice, when the question of operation is broached volunteer the remark that such treatment is out of the question, owing to their being advanced in life. All such patients are naturally more or less advanced in life, otherwise they would not be seeking advice for an old man's complaint.

Of late many medical queries have appeared regarding results aside from mortality following prostatectomy, and from these I judge numerous poor results have been recently observed. That such should be the case is not to be wondered at. Prostatectomy for a considerable period has been performed only by a few surgeons, who have become highly proficient, and whose after-results have been so satisfactory as to attract much general attention. This has induced many surgeons, some of whom may not have hitherto given that branch of surgery any particular attention, to make a trial of the various prostatectomy procedures. Some of these beginners will doubtless soon retire from the field perhaps with faint praise for this branch of surgery, while others will after a little become more proficient. In any event, as the result of both these factors it is but natural that hereafter one will hear less regarding poor after-results.

I consider prostatectomy a highly technical procedure. It is not difficult in removing a prostate to do such damage to the structures of the vesical neck that undue urinary dribbling may follow. The sexual function may be needlessly deranged through rupture of the seminal vesicles or their ducts. One should be able to assure a patient that after prostatectomy he will be able to completely empty his bladder, no residual urine remaining. Still one hears of individuals claiming to have undergone prostatectomy who still have their residual urine. It has seemed to me after an experience approaching 400 cases that perhaps one of the chief reasons why so many surgeons have difficulty with prostatectomy is because most operators never depend on their sense of touch in operating, but always expose the seat of operation so that they can see what they are doing. The prostate lies very deeply. In order to see it when operating perineally or suprapubically a very wide dissection has to be made and much damage done to the tissues from the use of retractors. I never depend in the least on my sense of sight, but wholly on the sense of touch revealed in the tip of the forefinger. Even if I could see in one of these operations I would not trust the information derived from my sight, but would touch the part and be guided by the knowledge derived from my finger tip. By so operating a small incision only has to be made, and such an instrument as a retractor is never employed. No swabbing away of blood-clot is necessary. The finger sweeps about the vesical neck, and after it has found all obstruction removed, it may tell the operator that the neck is still too rigid or contracted, due to periprostatic inflammation, to allow of a complete restoration of the vesical function. Such being the case the neck is incised and left in order. The sense of sight would certainly not give this important information to the operator.

The conservative treatment for one suffering from prostatic obstruction is skilfully performed prostatectomy. After inflammatory symptoms have developed subsequent to obstructive ones it is then hazardous to longer depend on the catheter. —THE THERAPEUTIC GAZETTE.

SIMPLE NASAL OBSTRUCTION.

By W. S. SYME, M. D.

The subject of nasal obstruction is such a large one, and involves side issues of so varied a nature, should one attempt to discuss it in all its connections, that I make no apology for limiting my communication to what I have termed simple nasal obstruction, i.e., obstruction to the free passage of air. I am aware of the difficulty that I shall have in keeping to the track by thus curtailling my subject, but I shall endeavour not to deviate from it.

We have the septum, dividing the organ into two lateral halves, acting as the internal boundary of both nasal fossæ. It is composed of cartilage anteriorly, and of bone posteriorly, that pericondrium and periosteum being intimately connected with the mucous membrane. The internal wall of their fossa is much more irregular. Running from before, backwards, are three turbinate bones, covered by mucous membrane, and forming the inferior, middle, and superior turbinated bodies, or turbinals. The inferior turbinate, being part of the superior maxilla, is composed of firm, compact bone, whereas the other two, ethmoidal turbinates as they are sometimes called, partake of the cellular nature of the bone of which they are a part, viz., the ethmoid Beneath these turbinals we have respectively the inferior, middle, and superior meatuses. In reference to the subject of this paper. the naso-pharynx must be considered a part of the nose.

Normally, the space for the transmission of air is restricted to the narrow channel between the internal and external boundaries, and to the mental passage. In this respect, the value of these increases from above, downwards, i.e., the inferior meatus is the most important.

Nasal respiration has, for its aim, the heating, moistening, and purifying of the inspired air. For this purpose, the mucous membrane is arranged in such a manner as to expose as large

a surface as possible to the current of air, and it is probable, too, that the lining membrane of the accessory nasal sinuses lends its aid. In parts the submucosa is plentifully supplied with blood vessels in the form of wide venous spaces, these being found in greatest amount in the region of the inferior turbinal. The mucous membrane is also well supplied with glands, which are more abundant in some parts than in others. On entering the anterior orifice the air current is split up by the inferior turbinal, part, no doubt a large part, passing by the inferior meatus, while the rest is deflected upwards to the middle meatus and by way of this channel to the accessory cavities which open into it, to wit, the frontal, maxillary, and anterior ethmoidal. A small quantity, no doubt, reaches the superior meatus, and the sphenoidal and posterior ethmoidal spaces. And so it is brought about that much of the air, before it is drawn through the posterior nares, has had time and opportunity, during its residence inside the nose, to undergo those changes for which, in part at any rate, the organ is provided.

Anything which encroaches on the free space of the nasal cavities, or which interferes with the patency of the anterior and posterior nares, will cause nasal obstruction in greater or less degree; and in addition to the interference with the passage of air, we shall get, when the obstruction is situated in certain parts of the cavity, effects due to blocking of the openings of the accessory spaces, or to pressure on, or irritation of, nerves either directly, or as a result of congestive, inflammatory, or purulent changes consequent on the obstruction. It is with the obstruction, as it affects the air current, that we are concerned. As one would expect, this is found most marked when the obstruction is so situated that it completely closes the openings of both fossæ anteriorly or posteriorly at the same time. The commonest example of this is furnished by a severe case of adenoids, and with such we are all familiar. Among rarer causes acting in this way are bony and fibrous occlusion of the posterior nares, new growths, malignant and simple, in the naso-pharynx, adhesion of the soft palate to the pharyngeal wall, congenital in nature, or the result of ulceration caused by disease or accident. Occasionally, the naso-pharynx is badly developed, and a certain amount of nasal obstruction is complained of. This is worth remembering in relation to adenoids. The anterior nares are rarely completely obstructed on both sides. It is not uncommon to get narrowing from cicatricial contraction, due to former ulceration, and moreover the respiratory act is sometimes interfered with by want of the tone and falling in of the alæ nasi. New growths, gummata, lupus in this region may lead to obstruction.

The best example of severe obstruction, caused by intranasal conditions, is found in that tiresome affection, from which in this part of the world, few of us escape—a head cold. Here the airway is encroached on, or altogether obliterated, by the congestion and swelling of the mucosa, one side suffering more severely than the other if it is already narrowed by some abnormality. As with acute catarrh so with the chronic variety we may get the changes in the mucous membrane distributed generally, but it will better serve our purpose to consider intranasal obstruction in more detail and unilaterally. Hypertrophy of the inferior turbinal claims our first attention. This structure may be enlarged in its entirety, the ends only may be affected, or the changes may be limited to the bone or to the soft part. The commonest condition is hypertrophy of one or other extremity. Much less common is hypertrophy of the middle turbinal, usually of the anterior end. Though this is of prime importance in relation to other branches of nasal surgery, and to other nasal phenomena it is evident that, unless the enlargement is great, it is not likely to interfere much with the free passage of air. Still, a decided hypertrophy of the anterior end of the middle turbinal, both of the mucosa and of the bone itself, is not rare: it is sometimes found distended so as to form a bone cyst, and this may be of such a size as to give rise to complete obstruction. Looking now at the inner boundary of a nasal fossa, it is rather with the hard part than with its covering that we have to deal. The septum frequently has outgrowths called spurs growing from its surface. The commonest site is at the junction of the maxillary crest with the cartilaginous portion. These spurs are usually composed of bone, and, as they are situated, as a rule, opposite to the inferior turbinal, it is easy to understand that they may give rise to a good deal of respiratory difficulty. Another common septal abnormality is displacement, or septal deflection, as it is technically called. The part affected, as a rule, is the cartilaginous portion. Much less frequently is the vomer involved, at any rate to an appreciable extent. Thickening of the maxillary crest is however a common addition. Sometimes the deflected portion is bent as well, so as to more or less block both nostrils, and again it is not unusual to have a deflection and a spur combined. I shall only mention hæmatoma, abscess, œdema, new growths, as other conditions affecting the septum, which may give rise to difficulty of nasal breathing. Probably next in frequency in causing obstruction are polypi. There was a time when polypus summed up the diagnosis in all nasal cases. But all that is changed, though the popular mind is where it was. These growths may be found in both nostrils and this is usually the case. They may attain enormous dimensions, speaking comparatively, and they

may cause not only complete obstruction, filling both the nose and the nasopharynx, but also changes in the contour of the nose.

In reference to the blocking of one nostril, mention must be made of the possibility of the presence of a foreign body. In children, especially, a one-sided obstruction with purulent discharge should make us strongly suspect this as the cause. Though adults are not so given to this playful habit, it is not a rare experience to have to remove from the nose of an adult a foreign body, which has lain there, it may be, for years. A piece of necrosed bone, usually from the ethmoid, may act in the same way. Other causes of obstruction, of which the mention alone must suffice, are growths springing from, or growing through, the boundaries of the fossa, bone cysts of the ethmoid, other than of the middle turbinate, adhesions between the inner and outer walls. Moreover, it should be said that the amount of discharge present, as the result of increased secretion or inability on the part of the patient to expel it, may act of itself to cause obstruction, or to accentuate that due to some other nasal condition. In atrophic rhinitis, the discharge, as a rule, forms into crusts, which give rise to obstruction, but this symptom is sometimes complained of where little discharge is found, and where the fossæ are unduly patent. No doubt here the lack of the resistance to the inspiration of air, which is got in the normal state, by calling for less effort in the performance of the act, gives rise to the sensation of obstruction, such a sensation, for instance, as one experiences in trying to suck through a wide tube. And lastly, in rare instances, obstruction may be complained of without any nasal abnormality being present. Some of these are, no doubt, hysterical, but, in a few, there is probably faulty or erratic action of the soft palate.

Before leaving this part of the subject, I need hardly say that, though I have considered the causes of obstruction singly, we may have almost any and every conceivable combination, a septal deflection with polypi, or with turbinal hypertrophy, adenoids with turbinal hypertrophy, and so on.

The effects of simple nasal obstruction are local and remote or, to put it differently, effects on neighbouring tissues and organs, and on the body generally. Locally, changes occur in the pharynx and larynx, in the ears, in the conjunctivæ, in the face, and in the mouth. In all these situations, we may see in one and the same case, of adenoids for example, the bad effects of the blocking of the nasal passages. These have been so often and so fully discussed in relation to this condition that I shall not go into them in detail. But in obstruction from other causes, and in the adult, much the same results, though differing in degree, are frequently observed, such as laryngitis, pharyngitis of various kinds, congestion and œdema of certain parts of the face. The changes in the ears deserve more than passing mention. The commonest aural condition, consequent on nasal obstruction in the adult, is one of thickening of the lining membrane of the Eustachian tube and tympanic cavity, with subsequent adhesions and immobility of the ossicles, a slow and progressive process. Other middle ear changes are, however, sometimes the result of nasal abnormalities, and, even if chronic otorrhœa is not a direct consequence, it is, at least frequently, aggravated by the re-infection, which the nasal condition promotes, and which hinders the cure by simple antiseptic and other treatment.

Among the more general results are physical and mental debility, a lack of energy and a disinclination for concentrated or protracted mental exertion. In children, the subjects of adenoids, the interference with the development of both body and mind is sometimes very striking, a condition of practical imbecility being occasionally observed. Headache, in the shape of a sense of oppression and weariness, is not an uncommon complaint. Any mental effort may bring it on, or it may appear on waking in the morning, and pass off after an hour or two. In such cases in the adult, it may be found that the nasal obstruction is of an intermittent character, and only shows itself in the recumbent position, the nostril of the side lain on being the more affected. At the same time, it should be said that, in the production of the general effects, there are other factors to be considered than the interference pure and simple with the passage of air through the nose. This is a subject with which I have dealt elsewhere,* under the title of Nasal Headache, so that I shall not consider it further here.

There falls now to be considered the important question of treatment, and, as any one of the conditions causing obstruction might reasonably demand a paper at least as long as the present for the consideration of its appropriate treatment, it is evident that I cannot do more than discuss this part of the subject in a very general way.

Certain of these affections admit of only one treatment—removal; at any rate it would appear to be waste of time to debate this. Sometimes, in dealing with adenoids, which may be causing little obstruction to breathing, we may hesitate to advise their removal. If, however, there is an ear disease dependent on them, or if they are a source of danger from purulent processes connected with them, our position towards them will be modified. It is rather, however in the treatment of certain intranasal affections that there is real difference of

* Glasgow Medical Journal, October, 1906.

opinion. On the one hand we have, surgically speaking, the passive resister, on the other, the very active operator. If we could only combine the two in the proportion, say, of one-third of the former with two-thirds of the latter, we should get, I think; a well-balanced nasal surgeon. It should be our endeavour to leave, compatible with the establishment of sufficient nasal breathing, as much of the functionating part of the nose as possible. This is, of course, merely stating in nasal terms what is a prime rule in all surgery. This rule, however, should not be made a bogey in intranasal operative procedure. To take a concrete instance, if it is possible in a case of inferior turbinal hypertrophy to obtain a sufficient airway by a slight reduction of the redundant tissue by the use of lotions, sprays, ointments, or even by the cautery, well and good, but, if the removal of one end of the structure, of both ends, or even of the whole turbinal is required, we should not hesitate to carry this out. It is quite true that the improvement in the methods of operative treatment of abnormal conditions of nasal structures, and perhaps, this applies more to the septum than to other parts, is a temptation to excessive surgery, still it is surely a confession of weakness to make this an excuse for going to the other extreme.

In some cases it may happen that the re-establishment of nasal respiration can be best obtained by sacrificing a normal structure rather than by dealing with an abnormality which may be present. This consideration arises especially in connection with septal deformities, where removal of the anterior end of the inferior turbinal may serve the purpose as well as by attacking the septum. However, since the introduction of the sub mucous treatment of septal deflection and septal outgrowths, with the consequent improvement in the healing process, this surgical substitution less frequently arises. In connection with aural affections, there is no doubt that, by the removal of nasal conditions, which may not be giving rise to a high degree of obstruction, and which, on this account, might be left alone, we frequently get an increase in the hearing distance. But this is a large, and, to a certain extent, a controversial subject, and one into which many considerations enter, so that it would be unwise to discuss it in a few words.

The result of the re-establishment of sufficient nasal respiration is, in the great majority of cases, of a most satisfactory character in regard both to the dependent local affections, and to the general health. We are all familiar with the benefit which follows the removal of adenoids in children, and in adults the results are, in many cases, not less pleasing. In some cases, the removal of the nasal affection must be looked upon, not as the end, but as a necessary preliminary to the treatment of the secondary diseased condition.—THE PRACTITIONER.

A Mirror of Practice.

THE TREATMENT OF CARDIAC DILATATION.

Duckworth in the Lancet of June 15, 1907, tells us that the main indications for tretment are first to promote the power of the heart walls, and secondly to relieve the venous engorgement which has arisen from their loss of function. The more depressing duty is to unload the venous system. The question of depletion by letting blood has first to be considered, and the general condition of the patient as to strength, age, and history of the cardiac ailment will determine our action in this respect. It is seldom that we can be justified in a general venesection from the arm, unless it be in small amount, say to the extent of six or eight ounces. We shall oftener do well to limit our direct bleeding to the application of six or eight leeches to the epigastric or hepatic regions. This may not secure more than two or three ounces of blood, but the process of leeching, now so much neglected, is a source of more relief and comfort than the mere amount of depletion would indicate. There is a marked counter-irritant action induced by leeching which has, doubtless, some beneficial effect. Certainly the relief thus afforded is very marked, the pain, tumidity, and oppression being greatly dispelled. A poultice should be over the leechbites, and while this encourages further depletion it induces a favorable hyperemia over a large surface.

We may next try to relieve the hepatic congestion further by such purgation as the particular patient can bear with impunity, and in this way help to relieve the general systemic venous engorgement. By far the best purgative here is mercury in some form. To urge bleeding and the use of mercury in these days may appear to some as a revival of old and effete practices. We are supposed, especially by the public, to have abolished all such methods now and to employ simpler and better ones. Such treatment is thought to be weakening and blood to be too precious to shed in the twentieth century. In the opinion of the author this is nonsense, and not to employ such measures is to be void of all wise clinical instinct, and to be deprived of the only real methods of affording relief to our patients. It is hard enough now to implant this knowledge in the mind of modern students. Their minds are so full of imparted ideas about toxins, microbes, opsonic indices, neurons, and extra-pharmacopœial remedies that there is no room to hold precious knowledge of approved clinical methods

and of the virtues of pharmacopœial drugs, and with all this modern development we are fast losing the old-fashioned art of medicine and have too little teaching of it in the schools.

The action of mercury is not merely a purgative one, but it is the best agent for lowering the resistance so commmonly existing in these cases in the arterioles and capillaries, and thereby relieving the labor of the cardiac walls which is exhausting them. The sources of this obstruction probably lie in the liver or alimentary canal and are cleared away by mercurial influence. Calomel, blue pill, or gray powder (with colocynth and henbane), in doses of from two to five grains, should be given at once over night, followed by a saline aperient in the morning, and repeated for one or two nights, subsequently being taken twice or thrice a week according to the effect produced. The author makes no mention so far of digitalis or other tonic for the laboring heart, as he regards these as not being the primary needs. Relief will be already largely afforded in all directions by the treatment, and we may then begin with Baillies's well-known combination of blue pill, squills, and digitalis. "By day we may give tincture of digitalis with nux vomica, ammonia, and compound spirit of ether in mixture.

The dietary is important. It should be rather dry if it can be borne. Small feeds every three or four hours with solid or semisolid food are best. Much fluid with the meal is objectionable, oppressing the stomach and the heart. Between meals the patient may take coffee, if possible, and fresh lemonade containing bitartrate of potassium one drachm to the pint. This is especially useful in removing any dropsy. If solid food is loathed we may use beef essence or jelly, or fish, pounded meats, scraped ham or chicken, or milky pudding in small quantities. Alcohol is commonly necessary, old brandy being the best form in which to give it. It is seldom necessary to exceed two to four ounces in the twenty-four hours. Two ounces of cold or hot water or of some alkaline water may be given at intervals if there is much thirst, and a larger quantity of hot water early in the morning is useful to wash out the alimentary canal and to promote a more free diuresis, which should be looked for. When the heart is relieved we generally find a more free urinary flow to occur. Later we may employ iron with strychnine or phosphoric acid with nux vomica as appropriate tonics. Ascites, if urgent, may demand tapping, and extreme edema of the legs, if it does not yield to the remedies just mentioned, must be dealt with by Southey's trocar, careful aseptic precautions being always observed. It may take several hours to relieve the abdomen by the method, but it is the safest one to adopt. There is often difficulty in securing adequate rest and sleep at night. Recumbency is seldom possible, and if propping up by pillows is not adequate to secure easy respiration the patient is better allowed to sit in a properly adapted chair with support for the arms and a rest arranged for the head to lean somewhat forward. All full dose of compound spirit of ether, with 10 or 15 minims of a solution of morphine hydrochloride, may prove very soothing in the worst forms of restlessness and insomnia with dyspnea.

Under the influence of these measures it is often remarkable how much improvement may be wrought in these distressing conditions. Yet the patient is always in danger of relapses unless he is extremely prudent in all particulars. In hospital patients we see the worst symptoms in such cases. They secure marked relief, but a return to work on exposure to unwholesome environment and the varieties of the rest angusta of the poor soon induce a recurrence of the original symptoms, and they return to die. For the better placed in society we may hope for a happier outcome with continued skilled supervision of their daily lives. But in them a time arrives when the measures we have enjoined fail to bring relief—the myocardium is worn out, recuperation is at an end, and a fatal issue is inevitable.

Annotations.

INJURIOUS FOOD.

Some foods are very injurious to the sight. A case was brought under the notice of the eye specialist in which the eyes of a whole family were affected by eating rabbit pie. In each instance the patient had become afflicted with a peculiar defect of vision that is technically known as "failure of accommodation." Some foods are proved to be the cause in a case of weakening of the sight known as amblyopia. Stale sausages and sour cream are equally injurious. Blindness resulting from eating tainted fish has been found almost impossible to cure, and quinine is also responsible for some person's half-blind condition. This drug affects the optic nerve in a manner that sometimes ends in blindness.

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The Indian Lancet.

CALCUTTA : MONDAY APRIL 6th, 1908.

PHYSICAL EXERCISE AND HEALTH

An objection frequently urged against exercises which cause a free perspiration is the danger of taking a chill. There is no risk of this so long as the exertion goes on, and when it is discontinued, if the surface of the body is well covered to protect it from rapid loss of heat, we shall rarely hear of physical exertion resulting in chill. Once more the action of the heart, as everyone must have observed, is directly influenced by active exertion. There is an increase in both the force of the beat and its frequency, with a corresponding augmentation of its power. This is perfectly natural so long as the beats continue to be regular and equal. On the other hand, if the action becomes irregular, it indicates that the heart's strength is being over-taxed, and demands that the exertion, whatever may be its nature, should be immediately discontinued, or its amount considerably reduced. A knowledge of this fact enables us at all times to test the effects of our exercise, and enables us to decide whether we are exceeding the limits of what is beneficial for health. The increased force and frequency of the heart-beat which thus naturally accompanies exertion will augment and quicken the flow of blood, and the circulation will be carried on with larger volume and at a more rapid rate.

The accelerated flow of blood carries more of the elements of nutrition to the various tissues for purposes of sustenance and repair, and the substance of the heart itself must necessarily share in this advantage. It follows, therefore, that while physical exertion calls for greater effort on the part of the heart, it is indirectly a means of providing the organ with more ample nourishment, and tends to a gradual increase of its strength. There is yet another department, which largely shares the benefits of physical exertion, and that is the muscles of the body generally. It is universally admitted that our limbs become stronger by constant use, and this is practically saying that exercise of the muscles promotes their health and strength. And so it does; but how is this result accomplished. The nutriment of a muscle is in exact proportion to the quantity of blood which passes through it, because its nourishment is derived entirely from this fluid. When the muscles are in a state of activity (as they must be during physical exertion) more blood is drawn towards them than would reach them in a state of repose. We have seen that the increased force and frequency of the heart accelerates the flow of blood; this is still further augmented by a kind of suction action on the part of the muscular structures themselves.

Their very activity renders them more thirsty, as it were not for the sake of the fluid itself, but on account of the additional nutriment the extra blood would naturally supply. Hence the wear and tear which must inevitably result from increased exertion is promptly met by an increase of the nutrition and abundant material to repair. In other words, the more the muscles are exercised, the more liberally they are nourished, and the better they are fed, the stronger they become.

The slight sense of fatigue which accompanies an early effort deters many persons from habitual exertion. They say that they become so quickly tired that they do not feel strong enough for the work. This sense of fatigue is seldom in proportion to the amount of actual exertion; it is more frequently the consequence of previous inactivity. By frequent repetition of an exercise the feeling of effort, with its accompanying sensation of fatigue, grows gradually less and less, so that within the limits of health a greater amount of physical exertion can be borne.

Efforts which are repeated daily are performed at less and less cost to the system, so that by habitual exertion the expenditure is considerably reduced. Is this not so with walking? If a man of sedentary habits starts a walk of six or eight miles,

it is a hundred to one that he does not reach his journey's end. On the other hand, if he began with a couple of miles, and repeated the walk daily with a gradual increase of distance, he would soon find himself able to do the half-dozen miles with less fatigue than he experienced at first with the two.

Those persons whose occupation provides them with an adequate amount of outdoor exercise may safely allow matters to rest; but those whose habits are of a sedentary character, or whose ordinary employment keeps them within doors, will find demands made upon their health which they are totally unprepared to meet. The normal changes in the tissues of their bodies will be incomplete, waste products will accumulate in the system, and produce disturbance of so grave a kind as to deprive them of both the enjoyment and usefulness of life.

Current Medical News.

MALARIA IN BENGAL.

Drainage Committee's Report.

The following important Resolution of the Bengal Government on the Report of the Drainage Committee of the Presidency Division appears in the Calcutta Gazette:

The attention of Government having been drawn to the prevalence of malarial fever, in Bengal, a committee, consisting of the Hono'ble Mr. Inglis, Chief Engineer, Bengal, Member and President; Captain W. W. Clemesha, I. M. S., Sanitary Commissioner, Bengal, Member; Mr. H. Wheeler, I. C. S., Member and Secretary, was appointed in Government Resolution No. 1379-Medical, dated the 26th March 1906, to investigate the question so far as the Presidency Division was concerned, their attention being particularly directed to the main cause of malaria which was known to be the obstruction of drainage. The objects of the inquiry were those enumerated in paragraph 5 of the Resolution cited above, viz.—

(1) To ascertain in what areas malaria is now prevalent.

(2) To investigate the cause of the disease, and in particular to determine whether it is due to obstructed drainage.

(3) Where malaria has been caused by obstructed drinage, to decide whether a drainage scheme is practicable.

(4) To prepare a list of practicable drainage schemes in the Presidency Division arranged in order of urgency.

The Committee were assisted by Captain G. E. Stewart, I. M. S., and Lieutenant A. H. Proctor, I. M. S., whose services as experts in bacteriology were placed at the disposal of this Government for the purpose by the Government of India. During the course of the inquiry the place of Captain Clemesha on the Committee was taken by Lieutenant-Colonel F. H. Clarkson, I. M. S.

The Committee's report deals in a thorough and practical manner with the questions referred to them for consideration. They commence by defining the malarious areas in the Presidency Division: in doing so, they point out that a large number of the deaths at present reported as due to malarial fever are not due to that cause, and they record their opinion that so far as can be ascertained one-third only of the deaths returned from fever are caused directly by malaria. They then proceed to record definite conclusions as to the prevalence of malaria in each district, giving a list of the thanas in the whole division in which malaria is most prevalent: their conclusions are for the most part based on the figures published with the annual Sanitary Report, but are to a certain extent corroborated by local opinion and by the recent inquiry made by the medical officers specially deputed for this purpose.

In the districts of Nadia and Murshidabad it is an open question whether a large number of deaths at present supposed to be due to malaria are not actually due to Leishman-Donovan infection, and the Committee think that further investigation on the point is required.

In connection with this portion of their inquiry, the Committee also consider that a case exists for further inquiry, in order that an examination of the relative healthiness of a smaller area than the thana may be made. They therefore suggest that as an experiment the vital statistics should be compiled according to the chaukidari union, the object being that the recorded unhealthiness of a particular area may be noticed at once, instead of being merged as at present in the thana figures. The Lieutenant-Governor approves of this suggestion, and the Sanitary Commissioner, in consultation with the Commissioner of the Presidency Division, will be asked to arrange for the experimental compilation in selected thanas of vital statistics for individual chaukidari unions; the cost of the experiment will be met by a grant from provincial revenues.

Causes Of Malaria.

In detailing the causes of malaria, so far as they can be ascertained from the information at present available, the Committee take practically the same ground as that taken by every Fever Commission in the past. There are two main causes:—

(1) The insanitary state of the village sites.

(2) The water-logged condition of the country.

As they point out, and has often been pointed out in the past, the sanitary improvement of the village sites can only be carried out by the people themselves; and until the villagers are educated up to a point at which they understand the benefit and ordinary common-sense sanitary precautions, little progress can be hoped for. Captain Stewart and Lieutenant Proctor, in their final report on the districts of Jessore, Nadia and Murshidabad, which forms appendix I of the Committee's report, suggest that "the value of sanitation, the prophylaxis of

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malaria by the use of quinine and mosquito-curtains, and the efficient treatment of malaria by quinine, are matters which might well be taught in all schools." The proposal is one that is worthy of consideration, and if it is found to be practicable effect will be given to it.

The report also deals with the question of the water-supply, the destruction of mosquitoes, and the distribution of quinine. An important proposal made is that selected hospital assistants should be deputed to travel systematically in the most affected areas during the fever season to distribute medical aid. The suggestion commends itself to the Lieutenant-Governor, and the Inspector General of Civil Hospitals will be asked to submit definite proposals to give effect to it. The measure has been tried in some districts, but may with advantage be extended to others. The cost will in the first instance be met by Government, and will doubtless be taken up later by the District Boards if the experiment proves successful.

Drainage.

After pointing out the two obvious limitations to drainage in the division, i.e., the universal cultivation of rice which requires an abundant supply of surface water, and the low level of the country generally, the Committee proceed to divide the existing obstructions to the drainage into three classes:—

(a) in the village sites.
(b) and (c) in the bhils and rice-fields.
(d) in the rivers.

The insanitary condition of the village sites has been frequently noticed in the past, and there is little new that can be said on the subject: the Committee go so far as to say that this is probably the primary cause of malaria. The main remedy suggested is the creation of local bodies having the necessary powers to enforce local sanitation; provision has already been made in the Bill to amend the Local Self-Government Act for the creation of such local sanitary authorities. It is also suggested that Government should, as an object-lesson, take action in a selected area. This is already being done, and experiments have for some time past been carried on in several places for the destruction of mosquitoes, but so far they have not been a success.

The Committee are of opinion that any action taken for the drianage of the existing bhils must be good, and that there are many schemes which are quite feasible: the action to be taken however, can, they consider, only be ascertained by a detailed inquiry.

In dealing with obstructions in khals and river channels a distinction is made in the report between real obstructions in "live" rivers and stagnation owing to want of water entering the channels. Much stress has always been laid by the public on this latter class of obstructed drainage; properly speaking, it is not obstructed drainage, and it is due to natural causes which cannot be controlled. The present report shows conclusively that it is impossible to revive these dead rivers; that any measures for their partial improvement are undesirable from an engineering point of view; and that as the effect of any such measures on the public health would only be slight, the money could be spent much better in other ways. All recent inquiries show that the embanked roads and railways are not responsible for malaria, and that their removal will not prevent it.

Drainage Schemes.

In chapter I of the report a more or less detailed survey is made of the drainage schemes which have been proposed in the various districts of the divison. Many of the schemes proposed are impracticable, and with regard to a large number the information placed before the Committee was not sufficient to enable them to decide whether these could be carried out, or would, if carried out, benefit the public health. They, however, recommend a concentration of energy on the following schemes which they consider practicable:—

(a) Murshidabad district—Berhampur and Gobra Nala schemes.

(b) Jessore districts—Bhairab scheme.

(c) 24-Parganas—Bagjola scheme.

(d) 24-Parganas—Nawai and Soonti scheme.

These schemes have already come under the consideration of Government. The Bhairah and Bajola schemes will be carried out by the local authorities concerned under the provisions of the Bengal Sanitary Drainage Act; the other projects mentioned are not yet sufficiently advanced to permit of a final decision as to their merits. The Commissioner of the Division has also been requested to take steps to have those projects proceeded with which are so simple as not to require the services of a special engineering staff.

On a review of all the circumstances and conditions, the Committee recommend further systematic and oragnised inquiry both as to the local medical conditions and as to the existing obstructions to drinage. For the purpose of this work, they advocate the creation at the public expense of a special engineering division, which would be charged with the examination of the drainage conditions of specified areas and with the preparation of projects for the improvement of the drainage where necessary. With this proposal His Honor is in complete accord; it is obvious that any serious attempt to grapple with the problem must, if it is to be successful, be based on systematic and continuous investigation. It would be quite impossible for the Sanitary Engineer, with the limited staff at his disposal, to undertake such, investigation, and a special agency is therefore, essential. The Government of India will now be addressed on the subject, and it is hoped that the staff recommended by the Committee will be appointed as soon as possible; the proposed division will be immediately subordinate to the Irrigation Department of

Government, but will work in close connection with the Sanitary Commissioner and the Sanitary Board. With regard to the medical aspect of the question, also, the Committee are strongly of opinion that a case exists for further research, and they recommend that such inquiry should be systematic, and in no larger area than can be adequately undertaken. Complete prevention, as is pointed out, can hardly be hoped for, but the possibility of remedy rests primarily upon the correct ascertainment of the conditions governing the problem; they therefore advocate systematic and continuous investigation during each fever season, in order to determine the exact prevalence of malaria within individual thanas, the extent to which deaths reported from "fever" are in reality due to malaria and the conditions governing the distribution of the disease which may afford a basis for remedial action. Sir Andrew Fraser accepts these conclusions, and the Government of India will now be asked for the services of two officers of the Indian Medical Service for this work.

The Lieutenant-Governor has read the report with great interest, and he entirely agrees with the conclusions arrived at by the Committee: he does not propose to discuss in detail the minor recommendations which have been made in the report, but he is in entire accord with the Committee as to the necessity for these measures, and steps will now be taken to give immediate effect to them. The report is an eminently practical one, and the measures therein advocated will, Sir Andrew Fraser trusts, go far towards removing, or to some extent decreasing the great waste of life at present caused by malaria and other allied fevers. His thanks are due to the members of the Committee for their labours.

INFANTILE MORTALITY.

In connection with Dr. Cook's report on infantile mortality, it was resolved on the motion of Dr. J. N. Gaosh, seconded by Dr. R. G. Kar, that for the present the experiment of giving the free help of two qualified midwives to poor women during childbirth be tried in two selected places in Districts I and II.

On the motion of Mr. W. J. Simmons, seconded by Mr. Madge, the following resolutions of the Burial Bye-Laws Special Committee were confirmed:—

"That the Christian Burial Board be requested to revise the rules under the Burial Boards Act V of 1881 so as to bring them into conformity, so far as may be possible with the bye-laws approved by the Corporation."

"That the extension" (as regards the Lower Circular Road cemetery "is at present not a Government cemetery, and therefore a notification under Section 5 of the Bengal Act of 1881 cannot issue. The Committee consider that to overcome this difficulty the best course would be for the Government to purchase the extension from the Corporation at their out-of-pocket cost. The Government appears to have hitherto purchased public cemeteries in Calcutta. The Committee consider, however, that the Corporation should guard themselves against the recommendation being construed in any way as affecting the future administration of the Jaubpore cemetery."

VACCINATION IN BOMBAY.

In the Bombay Presidency Vaccination Report for 1906-1907 the most noticeable feature is the decrease in the number of vaccinations. There were, during the year, 591,617 primary vaccinations, 37,597 re-vaccinations, against 610,130 and 45,340 respectively, but these decreases of 18,453 and 7,033 are accounted for in a variety of ways. In the Western District there was much interruption by reason of vaccinators having to attend classes of instruction in the use of preserved lymph. In the Presidency circle the decrease was due to an outbreak of rinderpest among the calves. In the Central and Southern Districts, there was a slight increase in the numbers, but there were decreases in Aden Sind and Gujarat, especially Sind, where malaria was very prevalent. Vaccination amongst children gives the most striking figures in the report. Excluding Native States and Aden the number of infants available for vaccination, after deducting the number of deaths under one year of age, was 437,683 against 473,961 in the previous year, of whom 368,819 or 75·63 per cent were successfully vaccinated, compared with 81·08 per cent. The general percentage of successful vaccination was 85·34, while 3·79 per cent were unsuccessful, and the results in 42,313 cases could not be ascertained, and the percentage of success, excluding unknown cases, was 95·93.

SHORT ITEMS.

The application of elastic bandages to the limbs to cut off their blood supply, will increase the amount of blood going to the vital centers and, therefore, is very beneficial to patients who have to be operated upon in a condition of shock.

A diffuse blotchy condition of the skin should not be diagnosed as measles until a careful physical examination has been made. The condition may be the expression of a streptococcemia, as from an osteomyelitic focus.

There is such a condition as idiopathic swelling of the liver—an acute hepatitis—due to an unknown cause. The condition gradually subsides without treatment.

The palpation of pulsating vessels in the vaginal fornix of a woman who has skipped a menstrual period, will often give the clue to a possible ectopic gestation.

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In Hæmorrhages at the Climacteric.

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The Executive Committee solicit public support to enable them to fully and more fittingly carry out the objects of the Institution, more especially of the attached Hospital and Dispensary. The College, with its connected departments, have been maintained, in the past, partly from the fees of the pupils which is quite inadequate for the purpose. The expenses connected with the upkeep of the Hospital and Dispensary are enormous.

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2. For building a Hospital which, unlike the present building, will be the property of the College. For the "Hospital Building Fund" subscriptions and donations are specially solicited.

Gifts of clothing, bedding, suitable furniture, furnishings, medicines, surgical instruments, microscopes, pathological and other specimens, medical books and medical journals (old or new) for the library, articles of food (suitable for European and Native patients, etc.), will be thankfully received.

The Members of the Medical Profession, in India, are respectfully asked to co-operate and help, as much as lies in their power.

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Current Medical Literature.

MEDICINE.

GASTRIC AND DUODENAL ULCER.

Perforated gastric or duodenal ulcer should be curable in a good percentage of cases if promptly recognised, the mortality being in direct ratio to the time allowed to elapse prior to operation. Perforation is apt to occur without any especial warning or exacerbation of gastric symptoms, and often without any previous history of such symptoms.

The operative procedure should be simple, quick, and accompanied by as little manipulation of intra-abdominal contents as possible. Closure of the perforation by suture without attempt at freshening the edges or excision of the ulcer is generally sufficient. Gastroenterostomy is better held in reserve as a secondary operation, and may never be required. C. H. Peck (Medical Record.)

HYSTERIA.

The tendency of late has been unduly to extend the conception of hysteria and to apply definitions that are fundamentally defective. To claim disintegration as the essential feature of hysteria seems to the writer an error, and Babinski's view that the symptoms of hysteria owe their origin entirely to suggestions from without, is also open to criticism as ignoring the cardinal pathologic feature, the pathologic suggestibility of hysteria Three cardinal neuroses exist, neurasthenia, hysteria and hypochondria, widely differing in their clinical features. Then there are further the neurasthenoid states prodromal to the fully developed psychoses and the symptomatic neurasthenia accompanying and dependent on various visceral and general diseases, organic and functional, in which the symptoms are never those of true neurasthenia. The writer at some length goes into the description of the fundamental distinctions between neurasthenia, hysteria, and hypochondria. In the first named the essential symptoms are always those of chronic and persistent fatigue, while the adventitious symptoms are the secondary outgrowths of this fatigue. The physical symptoms of uncertainty of movement, subjective dizziness and headache are secondary consequences of this fatigue, as are also the psychic ones of deficient will power, indecision, irritability, and fear secondary to the mental fatigue with its primary symptoms of incapacity for sustained effort and attention. In hysteria, all the symptoms have a distinct impress of their psychic origin. Motor and sensory phenomena go together, without regard to nerve supply or spinal segmentation, if an arm is paralyzed it is also anæsthetic; the whole member is elided from the field of consciousness. Mentally, there is unusal emotional mobility with defective inhibition, an exaggerated susceptibility to impressions while fatigue symptoms are wanting. The exhaustion, headache, backache, and muscular weakness of neurasthenia differ widely from the localized palsies and anæsthesiæ of hysteria. The two symptom groups are directly opposed to each other. Neurasthenia is the fatigue neurosis; hysteria is the neurosis of pathologic susceptibility. Hypochondria differs from both, the fatigue sysmptoms of neurasthenia and the stigmata of hysteria are conspicuously absent and the cardinal symptom is a general disturbance of the general somatic sense; that is, the sensation derive from the body as a whole. The patient's normal feeling of well-being is profoundly disturbed, and he usually seeks an explanation of his condition in some disease of one or more organs.

In conclusion, the writer notices Prince's conception of hysteria as a form of psychic disintegration and that of Babinski that it is a special psychic state manifesting itself by disturbances that can be made to appear and disappear by suggestion. He holds that while disintegration may be a late phenomenon of hysteria in a limited number of cases, it is not enssentially a process of disintegration. Babinski, in his explanation, leaves too much out of consideration the pathologic nature of the suceptibility, and it utterly fails to account for some of the more remarkable features, such as the unilateral predominance of some of the symptoms, the peculiar association of some of the phenomena, etc. F. X. Dercum (Journal of the American Medical Association).

OFFENSIVE BREATH.

Offensive breath is sometimes due to bad teeth, and sometimes to dyspepsia. When the teeth are decayed, a visit must be paid to the dentist. When dyspepsia is the cause, the inhalation of a few drops of pure terebene from time to time. It is a condition which can be readily cured by a little attention to the general health and especially by avoiding constipation.

EFFECTS OF EXERCISES ON THE HEART.

Violent exertion normally causes changes in the blood pressure, temporary enlargment of the heart's area from dilatation or relaxation of the myocardium, and sometimes a fugitive murmur. The cause of the latter is not obvious. The chief result of training is hypertrophy. As abnormal results of exercise, we have acute dilatation, rare in healthy young men, especially if well trained, and as a result of habitual over-exercise; "irritable heart" and the other conditions associated with dilatation, hypertrophy, or myocarditis, and generally due in part to other pre-disposing causes.

——:o:——

SURGERY.

LUPUS OF THE NASAL CAVITY. A CLINICAL INVESTIGATION.

By Dr. Mygind (Archives fur Larynologie und Rhinologie, Volume XVII., No. 3). In a very important article reporting the investigation of 200 cases of nasal lupus, the author reaches the following conclusions: Intranasal lupus was twice as frequent in women as in men; nasal lupus with twice the frequency in the first 25 years of life; as a rule, the skin of the face was secondarily involved; the course of the disease was chronic and did not produce great destruction; the location of the lupus affection was usually around the nasal opening and especially upon the alae, where it was often distinctly localized, frequently the lupus resulted in a stenosis of the nasal opening; when, however, it affected the inner regions of the nose it ran a more rapid course and in those parts penetrated more deeply; it was sometimes localized upon the nasal septum, where it usually involved the anterior part of the cartilaginous septum and resulted in the formation of a round ulcer and subsequent destruction and perforation of the cartilage. It was seen upon the floor of the nose in 38 cases, and 32 times was found involving the inferior meatus of the nose. In 80 cases it involved the inferior turbinate body, where it usually was a superficial leison, for in only 46 cases was the bony inferior turbinate destroyed. The posterior choanæ were affected in only 3 cases. One of the most important conclusions which the author draws in this article is that lupus seldom extends directly from the nasal cavity to the mucous membrane of the nasopharynx.

CONGENITAL BENIGN INTRA-NASAL TUMORS.

By Dr. Mangus (Archives fur Laryngologie und Rhinologie, Vol. XVII., No. 13. The author says that it is a mistake to limit the disease to certain ages; for instance, Mackenzie has shown that benign intra-nasal tumors do not occur in children, and others have restricted the appearance of lupus to beyond the sixteenth year. More recently, however, certain observers have reported cases of polypoid formation within the nose of children two years of age, and some have described them as congenital. Le Roy found in the left side of a newly born-child an obstructing tumor about the size of a pea, and quite movable; and various other authors have described growths upon the middle turbinate body. To the cases already reported the author adds the history of a case in a child four months old, strong and well developed. Within the first week the breathing showed nasal obstruction, which was found to be due to nasal polyps springing from the middle turbinate body, and hypertrophy of the inferior turbinate body. He believes the cause of such a growth to be chronic inflammation of the mucous membrane. Discussing the therapeutics, the author gives the preference to the galvano-cautery in such young children.

——:o:——

OBSTETRICS.

ECTOPIC GESTATION.

Ectopic gestation in almost every instance occurs primarily in the tube, and if found as intraligamentous, abdominal, or tubo-ovarian, it has followed a primary rupture of the tube. It occurs in women, largely, who have long been sterile or who give some history of a catarrhal salpingitis.

Symptoms before rupture are: Missed menstrual period, followed by irregular flowing or irregular and prolonged bloody discharge. Pain, feeling of weight, and soreness in pelvis, followed by sudden sharp attacks of pain, intermittent, in character. Cervix softened, dilated; uterus enlarged moderately, often a bloody vaginal discharge; presence of a mass to one side of the uterus, tender on pressure. A large majority of the patient's consulted physicians previous to rupture.

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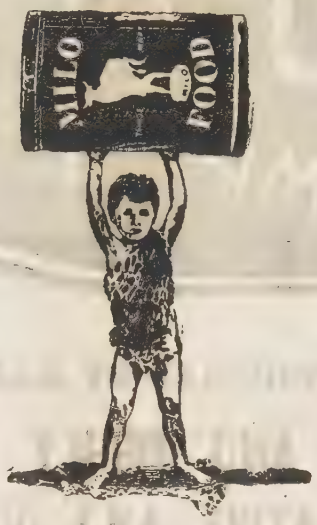

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Symptoms of primary rupture are: Sudden great pain, as if something had torn; faintness; collapse; if hæmorrhage great collapse is profound; pallor; rapid, thready pulse; subnormal temperature; shallow respiration; thirst. Examination show abdominal rigidity; a tumor mass in cul-de sac of a boggy feeling; uterus enlarged; cervix soft, dilated; bloody vaginal discharge.

Prognosis is bad for mother if unoperated on in at least 70 per cent. Operaton, if done in time, will save 92 to 95 per cent. of all cases. If the diagnosis is not positive before rupture, consultation should take place, and, if necessary, examination under anæsthesia, and, if diagnosis is confirmed operation should be performed at once. After rupture immediate operation should take place, if hæmorrhage gives signs of continuance; if signs of abating hæmorrhage, after shock is recovered from, operation should be done; but the surgeon must be prepared to operate immediately if bleeding again occurs. The operation should be preferably through the abdomen, only using the vaginal approach in some selected cases. Before the fourth month the products of gestation should always be removed; it is much the safer plan for the mother; the chances of a healthy living child are very remote. S. E. Getty (New York Medical Journal.)

THE TREATMENT OF ECLAMPSIA.

(Die Behandlung der Eklampsie.) E. Bumm, Berlin. Deutsche Medizinische Wochenschrift. The causes of eclampsia are still unknown; therefore our therapy is purely empiric and symptomatic. In the very severe forms of the disease, about 2-3 per cent. of all cases, we stand practically powerless. Fatal cases show chiefly widespread necroses in the liver and kidney. Severe types are also recognized by the early onset of deep coma, fever, hemoglabinuria or complete urinary suppression; icterus is frequently noted.

Whether the cause is ascribed to the fetus, to the placenta, or to reflex disturbances from the genitals or compressed ureters the indication for early emptying of the uterus remains preeminent, and the mortality after early interruption of pregnancy is small.

The onset is rarely sudden. Premonitory nephritis with scant, highly albuminous urine and casts, general edema, signs of general intoxication—headache, vomiting, dizziness, eye symptoms—precede the actual attack. Emptying of the uterus, in this stage affords prompt relief. After accouchement force following the first attack, the mortality in Bumm's hands has been 2-3 per cent.; where this measure is postponed it reaches 25-30 per cent.

Where the eclampsia manifests itself during the second stage, after the cervix has become partly absorbed, complete dilatation may be rapidly obtained by the Bossi instrument or by the rubber balloon. If the cervix is long and rigid splitting the anterior cetvical wall permits of delivery within 10 minutes.

The day for the use of large doses of chloral and morphin has passed. When the sensorium is unaffected and general irritability increased moderate doses of narcotics by rectum are of some use; but if coma has developed or is threatened these drugs are directly harmful by depressing the heart and respiratory action still further and thus hastening the advent of pulmonary edema. Chloroform anesthesia, lumbar anesthesia and lumbar puncture have all been tried and have all been found useless or harmful. Vassale recently recommended parathyreoidin; furtner trial is needed before a definite judgment can be formed.

The ordinary kidney stimulants appear powerless. The best found are large subcutaneous infusions (1,500 c.cm.) of salt solution, local applications of heat to the kidney and frequent kidney massage. Edebohl's renal decapsulation is sub judice. It is difficult to determine the proper time to use it. Hot packs or baths in cases verging on coma do harm by increasing the temperature, Pilocarpin injections should be discarded; they increase the tendency to pulmonary edema.

Stimulation of the respiratory and heart action is indicated. Respiration has a tendency to become superficial and unless the upper air passages are kept clear, by frequent cleaning of the pharynx, aspiration pneumonia supervenes. Bumm has tided patients over the crisis by long continued artifical respiration and heart massage. Where the pulse is full and rapid venesection proves useful.

PATHOLOGY.

THE PRESENCE OF SPIROCHŒTA DULTONI IN THE OVA OF ORINTHODOROS MOUBATA.

The writer has been able to confirm the finding of Koch of the presence of Spirochœta dulton (the organism of African relapsing fever) on the surface of the ovaries of infected ticks. The following procedure was adopted in making the observation. Forty-two naturally infected adult specimens of Orinthodoros Moubata collected in the Congo Free State were fed, on June 27th, 1906, upon an animal infected with Spirochœta dulton. These ticks were again fed on an uninfected rat on July 26th, 1906. This rat showed infection on August 1st; innumerable Spirochœtes in each field were seen on August 11th. As no eggs were laid, they were again fed. Ovulation commenced, but it was very scanty. Some twenty-

six adults were therefore fed once more on an uninfected rat ten days later. Large numbers of eggs were now found in batches about the dish. 32 ova were taken from different collections of these eggs and microscopically examined to detrmine the presence or otherwise of the Spirochœtes. Six of them were found to be infected. The number of the Spirochœtes found varied from 3 in the whole contents of one egg to as high as 45.

By far the majority of the Spirochœtes were of the typical, simple spirillar form. There were some peculiar forms also observed with swellings containing deeply-stained chromatin masses. From these observations, he concluded.—

(1) That ticks infected by Spirochœtes lay infected eggs.

(2) That multiplication of the Spirochœtes probably takes place in the eggs.

(3) That morphological changes in the Spirochœtes also occur in the eggs.

BLOOD-PRESSURE.

In the Journal A. M. A., Arthur R. Elliott treats of the therapeutic control of the blood-pressure in arteriosclerosis and Bright's disease. He believes that before proceeding with the exhibition of vascular drugs, the heart and circulation should be examined with the utmost care. Because the blood-pressure is high, it does not necessarily follow that vaseular relaxants are indicated; it may be that cardiac tonics are more urgently needed. It is well to accent the piont that because the blood-pressure is high it does not necessarily follow that it must be reduced by drugs to insure either the patient's safety or comfort. Active vasodilators (nitrites) may occasionally be necessary to meet emergencies such as stenocardia, angina pectoris, apoplexy prodromes, etc., under such circumstances they are perfectly justifiable and may be given with a freedom not at other times permissible. Blood-pressure may be reduced temporarily by vasodilator drugs, but it is very difficult to produce a permanent lowering except in the presence of a weak heart. It follows, therefore, that a material fall in blood-pressure which is more than temporary and due directly to vasodilators, especially if accompanied by quickened pulse rhythm and not marked by improvement in the patient's sense of well being, is ap to be unfavorable, being ominous of a weak heart. A sustained high blood-pressure (over 200 millimeters), if accompanied by symptoms of a disquieting character, may render a course of vasodilator medication advisable. The drug chosen should be slowly and cautiously introduced, closley watching its effects on blood-pressure, pulse rate, and the subjective state of the patient. The sudden employment of full doses of an active vasodilator is to be condemned, as it may produce serious consequences to the patient's heart and nervous system. A fall of 10 of 15% is, as a rule, all that is necessary or judicious to accomplish by drugs. The benefit derived from vasodilator medication can not be properly gauged by the blood-pressure record. The patient's subgective comfort, and more especially the pulse rate, form a better index of the effect produced. The employment of vasodilators in the late stages of Bright's disease with cardiac dilatation, dropsy, etc., is practically useless.

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THERAPEUTICS.

EFFECTS OF NARCOTICS ON THE UTERINE CONTRACTIONS.

E. M. Kurdinowski (Arch. f. Gyn., Bd. 80, H. 2) has made extensive experiments on animals by injecting different narcotic drugs intravenously during labor. He finds that there is no paralysing or retarding effect on the uterine contractions from chloroform, morphine, scopolamin, atropine or viburnum prunifolium, but that in some cases chloral hydrate diminishes the uterine contractions. While these drugs may be used to lessen the painful character of the conractions, it is found that they will not in any way retard the progress of labor.—American Journal of Obstetrics.

TREATMENT OF PURULENT RHINITIS.

M. H. Roger (Bulletin general de therapeutique) recommends irrigation of the nasal chambers with hydrogen dioxide solution, combined with an equal volume of solution of sodium bicarbonate (2 per cent.) After the douche, he makes a local application of petrolatum containing 8 to 10 per cent of menthol.

Meat but once day to the gouty, the time-honored advice: "No red meat and no vegetables taken from the ground." Proper daily exercise. Proper care of the skin and the eliminative functions; this includes regulation of the bowels and the daily bathing in the morning. Good, stout shoes should be worn, with cork insoles if necessary, and rubbers avoided unless in very stormy weather. Heavy furs and wraps should be avoided. The old sayiag that "sealskin sacques kill more people than the small-pox, is not far from the truth. Clothing next to the skin should be at least in part woolen. The Turkish bath has always enjoyed a high reputation for aborting coryza. If it be tried the patient must be kept indoors for some time, and if practicable should remain in the bathing establishment all night.—The Lancet Clinic.

A TENTATIVE SURVEY OF VACCINE THERAPY.

Current surgical literature teems with clinical reports on the employment of Wright's "vaccines" in a rather wide variety of bacterial infections. While these reports do not warrant any definite conclusions at this still early stage in the trying-out process, they do justify certain tentative generalizations. Vaccine therapy is helpful or even curative in at least some

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forms of bacterial infection. Localized infections of subacute or chronic type have responded best, and of these acne and furunculosis furnish, perhaps, the best examples. Urinary (chiefly bladder) infections also seem to be an amenable group. Tuberculosis of the skin and lymph nodes has responded more readily in the hands of Wright himself than in those of most other observers. More acute infections, e. g., cellulitis of the hand, probably also will be found responsive to vaccine-therapy as an adjunct to other treatment. Concerning acute systemic infections the reports thus far show no reason for enthusiasm. In many cases "stock vaccines" have worked as well as vaccines made from cultures of the infecting organism derived from the individual patients; in others "specific autogenous vaccines" have been found successful when "stock vaccines" have failed. In certain types of infection, perhaps in all, it is not sufficient to know that the infecting organism is, for example, a staphylococcus, but the variety or varieties of staphylococcus (aureus, citreus, etc.) must also be determined. As an indicator for dosage and frequency of vaccination observations of the opsonic index have been reported as unnecessary, and even useless.

Assuming for vaccine therapy a value that has thus far not been sufficiently demonstrated, the practical inference from the above tentative generalizations is that the vaccines can probably find general clinical employment. That is to say, if the study of the opsonic index is unnecessary, and if stock vaccines prove useful in a fair proportion of cases, this form of therapy can be made as available to the general practitioner as has diphtheria or tetanus antitoxin. Even definite bacteriological diagnoses, in communities where such diagnosis may not be easily available, may be proved not always necessary (in such cases, for example as furunculosis or acne), by the employment of mixed stock vaccines of two or three or more varieties of staphylococcus.

Fortunately, however, there are few communities where bacteriological diagnoses cannot be secured. The preparation of specific vaccines from an individual bacterial strain is a more difficult and more expensive matter, and where this may be necessary, vaccine therapy can hardly come into general employment, except in or near medical centers.

TREATMENT OF URETHRITIS.

Guiteras explains the methods by which he has obtained the best results in the treatment of urethritis. He treats the acute stage with alkalies, and the anterior astringent injections, composed of 5 grains each of sulphate of zinc, alum, and carbolic acid, with 1 drachm of glycerine to the ounce of distilled water; this is used three times a day after washing out the anterior urethra with hot water. Where there is great inflammation about the glans and prepuce, with possible lymphatic complications he vomits the injections and employs diluents, hot baths, and purgations. If the above injection has no effect, he employs a stronger one, composed of 10 grains of sulphate of zinc and ½ ounce of fluid extract of hydrastis to 4 ounces of water. Should this fail, he employs a still stronger one, composed of 10 grains of the sulphate of zinc, 15 grains of acetate of lead, 1 drachm each of tincture catechu and tincture of opium, to 4 ounces of water. This treatment is, as a rule, sufficient; but should the posterior urethra become invovled, a low diet, tincture of belladonna are given as soon as the symptoms abate somewhat instillations of nitrate of silver, 1 grain to the ounce, are given, and at the same time sandalwood, cubebs, or copaiba by the mouth. If the discharge is rebellious, daily irrigations of a solution of permangate of potash are employed, the catheter being passed as the bulb of the urethra, or, if necessary, the fluid may be injected into the bladder. If the gleety discharge continues, an endoscopic examination should be made and nitrate of silver applications made through it.—Medical Fortnightly.

THERAPEUTICS OF CHOLERA INFANTUM.

The types of disturbances of the alimentary tract that prevail in our cities during the summer months are modified by three factors: food, climate, and social environment. Treatment in the main consists of (1) absolute cessation of all food for twenty-four hours; (2) pure cold water freely given, heat to the feet, stimulants to the abdomen, and cold to the head. Intestinal antiseptics, as calomel, salol, bismuth, soda bicarbonate, opiates only when indicated. The odor of the stools determines the general class of fermentation, but all attempts to disinfect the intestinal canal by medicine have been disappointing. Lemonade, barley water and albumin water are pleasant and refreshing. Crush coffee is also beneficial. Medicinal treatment begins and ends with elimination. On empty stomach give calomel and soda bicarbonate, in small doses, ½ grain calomel to 1 grain of soda; this can be given every hour until eight are taken. Irrigation of the large bowel not only removes the fermenting substances, but cleanses the mucosa. With persistent vomiting and frequent purging, irrigation of the stomach, and, if the fever is high, ice water injections, or a bath gradually reduced. In conditions of extreme vomiting and purging, and when collapse seems inevitable, opium is our sheet anchor; this may be given in doses from 1-25 to 1-100 grain, which may be repeated in an hour, if necessary. When the distressing symptom of vomiting has stopped, mercury in form of the gray powder ½ grain in combination with Dover's powder 1/10 grain. Enemas of starch-water and laudanum are of great benefit in quieting and soothing if retained. When collapse is extreme hypodermic injections of a one per cent. saline solution may be used, and brandy and ether can be tried. Withhold milk for several days, but when used it should be diluted and thoroughly peptonized—Medical Fortnightly.

ADVERTISEMENT.

MESSRS. LAWRENCE & MAYO, Ophthalmic Opticians of London, Calcutta, Bombay, Madras and Rangoon, prepare at their Lens Works, any combination of Lenses and Prisms within three days of receipt of the formula.

Correspondence.

Audi Alteram Partem.

PLAGUE AND FAMINE IN THE PUNJAB.

TO THE EDITOR, THE INDIAN LANCET.

SIR,—Reports from Jeypur show that plague still rages in the city, and that some half of the inhabitants have fled.

Delhi City still remains free. The Health Officer is finding abundant scope for activity insuring the cleanliness of the city by a constant inspection, but he regrets the lack of co-operation afforded, particularly by the Hindus, in rat extermination.

At Ballabgargh, an area of scarcity, a native stationmaster and his family have been attacked by plague. The railway doctor, in attributing the cause, states that the disease was conveyed in imported hoarded and dirty grain from outside areas, some quantity having been condemned as musty and unserviceable.

Large stocks of imported grain are held locally and market prices have probably reached the highest point, red wheat retailing from seven to seven and-a-half seers per rupee.

Yours etc.,

W. G. L.

CHOLERA IN CALCUTTA.

NO CAUSE FOR ALARM.

TO THE EDITOR, THE INDIAN LANCET.

SIR,—Residents of Calcutta, despite the alarming reports of the past couple of days, need have no fear that the recent Yog festival has landed the city into a slough of cholera and other fearsome diseases. It is quite true that in Calcutta last week there were over 200 deaths from cholera, but these cannot be attributed to the great influx of pilgrims of last month.

The fact is that cholera always exists in Calcutta in a greater or less degree, and occassionally an alarming outbreak occurs. Such outbreaks, however, are usually confined to one quarter of the town, and, in the present instance, most of the cases are up north and the greater portion of them are imported. It might be reasonably expected, if the epidemic were a result of the Arddhoy Yog, that the bulk of the victims would be found in the vicinity of Kalighat and Bhowanipore, but this not the case.

It may be said, however, that the present mortality is above the average, though, when taken as an epidemic, the figures are not alarming. The Health Office officials also point out that in 1907, which was the worst cholera year since 1887, there were two epidemics, one in the beginning of the year, and another in October-November. There were, in the twelve months, nearly 3,000 deaths from the disease. Nothing that can be done by way of precautionary methods is being omitted and the hope is that any further development of the epidemic will be prevented.

At the meeting of the General Committee of the Corporation which was a few days ago held a large number of drainage notices were sanctioned with a view to ensuring an improvement of the conditions in this respect.

Last week also saw a rise in the mortality from small-pox. There were, in all, twenty deaths, and this number included some Europeans. This mortality is considerably in excess of that usual in non-epidemic periods, and it is not believed that an epidemic will occur at present. The last one is too recent, for small-pox visitations come with curious regularity—about once in five years.

Yours etc.,

W.

OPIUM GAMBLING.

TO THE EDITOR, THE INDIAN LANCET.

SIR,—Speaking at the annual meeting of the Punjab Chamber of Commerce at Delhi last Friday, Mr. Currie, the Chairman, said:—There is yet another matter which, while it hardly falls within the scope of the subjects you would expect me to refer to, is one you are more or less familiar with, and the results of which you all deprecate. I refer to the evil of the gambling that is conducted on the figures of the prices obtained for opium at the Government auctions. It is deplorable that such a number of shops in this city openly exist only for this purpose. I suppose the same must be the case in other cities. I am not aware what steps, if any, could be taken under the present Act to close them, but if it has been found impossible to deal with them it would be expedient, I think, for Government to change the method of sale from that of open auction to one of tender. If the sale figures were not publicly declared, if they did not issue with the authority of Government, they would cease to be useful for gambling purposes

Yours etc.,

A. M. S.

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LITERATURE.—PAMPHLETS BEARING UPON THE THERAPY OF THE PREPARATION WILL BE SENT, POST PAID, ON REQUEST.

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Acts as an intestinal antiseptic, as well as a purgative, eliminating germs and preventing auto-infection (ptomaine poisoning). This action is solely due to sodium sulphite contained as a fixed compound in the water.

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Does not weaken; it produces a tonic effect, stimulating the whole system; appetite is increased, sallowness and foulness of the breath disappear, headaches and vertigo vanish.

Is the only purgative water the use of which is unaccompanied with disadvantages in genito-urinary diseases.

Relieves women suffering with hemorrhoids and diseases of the uterus and ovaries, by reducing the congestion of the pelvic viscera.

Re-establishes the normal flow of bile, and is thereby a prophylactic in cases of biliary colic, due to the passage of biliary calculi.

Is indicated in cases of flatulency, bilious attacks, eczema, glandular enlargements and scrofula.

Benefits chronic nervous conditions, atony of the stomach and intestines, certain forms of diseases of the heart and circulatory system, chronic cases of skin affections and certain diseases of the lungs.

If used regularly alone, will often suffice in cases of influenza, diarrhœa, malaria, gastric and febrile disorders and infectious diseases by enabling the engorged, digestive, circulatory and lymphatic systems to regain their normal condition.

Acts in trifling doses. One small wineglass taken on an empty stomach immediately before breakfast produces a well-marked laxative effect in an adult. The dose for women or children should be reduced to one-half or one-third.

Is now considered an indispensable mineral water, especially in large city practices where it is important to husband the patient's strength, under penalty of their developing anæmia, or breaking down under the nervous strain and becoming neurasthenics.

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BRAINS OF DISTINGUISHED MEN.

How Great Minds Are Analysed.

To the Editor, The Indian Lancet.

Sir,—The study of the brains of distinguished men has always been fascinating, for it has ever held the hope that observable structural peculiarities might give some clue which would lead to the localisation of admired and envied faculties. In the past, however, the hope has been elusive, and, although the brains of some 140 more or less distinguished individuals had been studied, but little, according to the British Medical Journal, was to be gathered from the records beyond the fact that, taken as a whole, the brains of men of unusual mental calibre are more richly and more-deeply convoluted than the brains of more ordinary people.

In other words, it has been proved that greater mental capability is associated with greater areas of grey matter, the grey matter of an exceptionally capable brain being, as a rule, in excess of that demanded by the size of the body with which the brain is associated. Recently a step forward has been made by Professor Spitzka, who has deduced some very interesting conclusions from the results of his examination of the brains of six distinguished Americans. The brains he examined were those of J. Leidy, biologist and teacher; E. D. Cope, palæontologist and morphologist; P. Leidy, surgeon and organiser; A. J. Parker, morphologist; R. Allen, surgeon and zoologist; and W. Pepper, a distinguished physician.

Professor Spitzka's examination of these brains, which were associated during life with very exceptional faculties, confirms all that was previously known regarding richness and depth of convolutions and amount of grey matter. It shows in addition that white matter, and particularly the association fibres, also preponderate in the brains of distinguished men, as contrasted with the brains of men of smaller mental calibre. This preponderance of white matter, which, as Professor Spitzka points out, is so necessary for the happy and brilliant utilisation of the records deposited in the numerous cells of the abundant grey matter, is most strikingly and convincingly shown in the relatively great size which the corpus callosum (a thick collection of fibres connecting the two parts of the brain) attains in the brains of unusually capable men.

Professor Spitzka, however, goes still further, for he believes he is able to show that some faculties can be definitely localised and that, taking two men, both of great but of different, mental capabilities, not the same but different areas of their brains will preponderate. He supports his contentions by reference to the brains of Professor Cope and Professor J. Leidy. The former was "more creative, constructive philosophic," and he was brilliant in abstract generalisations. The latter "was a far keener observer," quick at seeing analogies, an excellent systematiser, and he had a splendid power of memorising and recalling visual impressions.

Yours etc.,

PITT.

NURSES FOR THE BRAHMAPUTRA VALLEY.

To the Editor, The Indian Lancet.

Sir,—The General Committee have been recently in correspondence with Captain Dening, the Honorary Secretary of the Eastern Bengal and Assam Provincial Committee of Lady Minto's Indian Nursing Association, and with the Chairman of the Assam Branch, with regard to the location of two nurses in the Brahmaputra Valley. Up to the present, the arrangement has been that the nurses for Assam, except those who are stationed in the Dooars live, when off duty, at Shillong, but it has been felt that this is not a suitable place for them, as its inaccessibility from distant parts of the province, and especially places on the North Bank, involves considerable delay in the arrival of a nurse when her services are required. It is understood that the location of the nurses at Shillong is, however, only a temporary measure, and that a proposal is being considered to have a central home for them at Silchar. This does not appear to the General Committee to satisfactorily meet the objection to Shillong as being inaccessible, as Silchar would not be any more convenient so, far as the Brahmaputra Valley is concerned. They have accordingly suggested that it might be a practicable arrangement to locate, say one nurse at Tezpore and another at Jorhat or Dibrugarh for service in the Upper Valley. This suggestion is under consideration, but the Committee are informed that there would be some difficulty in establishing several different homes for the nurses, as such an arrangement would necessitate considerable expense. The Committee, however were inclined to think that this drawback might be overcome if it were arranged that the nurses should live with families in the districts to which they were posted.

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It stimulates the liver and cleanses the entire alimentary tract, thereby preventing the development of conditions arising from indiscretion in eating and drinking, and is especially valuable in Rheumatism, Gout, Biliousness and Constipation.

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It was arranged to forward this suggestion to Captain Dening and Mr. Skinner, and at the same time to recommend that a similar arrangement should be adopted in regard to the raising of the necessary funds in the Brahmaputra Valley as has been fixed for the Dooars, and is under consideration for the Surma Valley—a levy of a certain amount per acre under tea.

Yours etc.,

S. W. K.

PASTEUR INSTITUTE FOR BURMA.

To the Editor, The Indian Lancet.

Sir,—At a public meeting held in the middle of last year, the Lieutenant-Governor presiding it was pointed out a that sum of Rs. 80,000 was necessary for the initial cost of starting a Pasteur Institute at Maymyo. Rs. 5,000 over and above this sum has been already collected, and the work, it is expected, will be started as soon as the sanction of the Government of India has been obtained to the proposal.

Yours etc.,

C. W. S.

A CHOLERA EPIDEMIC.

Result Of The Yog.

To the Editor, The Indian Lancet.

Sir,—The steady increase in the number of deaths from Cholera in the city as shown in the vital statistics, published weekly by the Health Department of the Corporation, leaves no longer any room for doubt that this disease has now broken out in an epidemic form and is ravaging chiefly the northern portion of the town and the southern suburbs. It is also raging furiously in the Cossipore-Chitpur Municipality. The figures for the week ending 21st March showed that the mortality from this cause alone had reached as many as 204. A comparison of the figures for the past eight weeks show that there has been a sudden jump from 24 deaths a week to 104 immediately after the Yog festival during which there was such a tremendous influx of pilgrims. Since there has been a steady rise every week, until there are now nearly thirty people dying daily of cholera. It seems pretty clear, therefore, that all the precautions that were taken by the Health Department of the Corporation during the Yog have been ineffectual in preventing the disease spreading; and judging by the fact that during the last three weeks the mortality has gone up from 128 to 151, and finally to 204, it would seem as if we have by no means seen the worst of the epidemic as yet.

Yours etc.,

R. F.

THE WATER OF THE GANGES.

To the Editor, The Indian Lancet.

Sir,—The reputation of the water of the Ganges among the Hindu millions of India is known to all, and most of us were content to believe that in a hot and thirsty land like Northern India such a magnificent river as the Ganges had many claims to be highly thought of, but it would appear as if modern science was coming to the aid of ancient tradition in maintaining a special blessedness of the water of the Ganges. Mr. E. H. Heukin, in the preface to the fifth edition of his excellent pamphlet on "The Cause and Prevention of Cholera," writes as follows:—"Since I originally wrote this pamphlet I have discovered that the water of the Ganges and the Jumna is hostile to the growth of the cholera microbe, not only owing to the absence of food materials, but also owing to the actual presence of an antiseptic that has the power of destroying this microbe. At present I can make no suggestion as to the origin of this mysterious antiseptic."

Yours etc.,

E. H.

THE GENERAL HOSPITAL FRAUD.

Linton Sentenced To A Year's Imprisonment.

To the Editor, The Indian Lancet

Sir,—Moulvie Mahomed Abdulla, Police Magistrate of Alipore, delivered judgment in the case in which one Linton, formerly a ward-master at the Presidency General Hospital, is charged with having criminally misappropriated Rs. 1,100 belonging to the hospital and to several patients, under circumstances already reported.

In delivering judgment, the Magistrate remarked that he had taken into consideration all the mitigating circumstances which were urged on the accused's behalf, and he sentenced him to one year's rigorous imprisonment.

Yours etc.,

C.A.P.

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explain the wonderful curative action of the preparation in the treatment of

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Piperazine. Easily dissolving urinary deposits, is promptly eliminated by the kidneys, and perfectly harmless. Strongly recommended in all cases of uric acid diathesis.

Sublamine. A preparation containing Mercury Sulphate and Ethylenediamine in chemical combination. By the presence of Ethylenediamine the irritating action to the skin is entirely avoided, and, what is equally important, a most phenomenal penetrative power is secured for the metallic disinfectant, inasmuch as the presence of Ethylenediamine prevents the coagulation of the albuminous substances of the skin usually produced by metallic agents, and thus permits of easy and deep penetration of the Sublimate without any inconvenience. Recommended for thorough hand disinfection. [of Berlin.

Urotropine. Registered Trade Mark. Manufactured under the control of Prof. Dr. A. Nicolaier, A valuable urinary antiseptic and uric acid solvent, very efficient in all suppuratory diseases of genito-urinary tract, pyelitis, cystitis, with ammoniacal decomposition of the urine, phosphaturia, and also in gouty and rheumatic affections, where active elimination of uric acid and the urates is required. Highly recommended in typhoid bacteriuria as a prophylactic against the spread of typhoid fever.

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MOST VALUABLE NERVE TONIC

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This remarkable compound, the result of the latest developments of modern Chemistry, Pharmacology, and Therapeutics, is without an equal in all cases of Nervous Exhaustion and Premature decay, whether induced by worry, overwork, or other exhausting causes. As a real nervine tonic and invigorating agent it has no equal in the whole field of Therapeutics and may be relied upon to impart "NEW LIFE AND VIGOR," and to restore weakened constitutions to pristine strength and energy. When every other medicine has failed, B. and S. SOLUTION has been prescribed in the most inveterate cases by the best physicians with success, and there are thousands of living witnesses to attest to the benefits derived from this great modern invention. The Profession will find it to be without a rival and the finest medicine ever brought to their notice.

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Reviews of Books.

"First Aid" to the Injured and Sick. By F. J. Warwick, B.A., M.B. M.R.C.S. &c. and A. C. Tunstall, M.D., F.R.C.S., Edin. Fifth Edition Revised and enlarged. 30th Thousand Publisher :—John Might and Co :—

Bristol.—It is a most useful and handy book on advanced ambulance. The few pages concisely contain all outline of human anatomy and physiology, then proceeds to describe the application of bandages and extemporised dressing. Then follow several most valuable chapters on urgent injuries, illnesses and poisoning. The book is most elaborately illustrated.

Government Medical Notifications

INDIA.

The services of Lieutenant-Colonel C. Monk, I.M.S. (Bombay) are replaced temporarily at the disposal of His Excellency the Commander-in-Chief in India.

Lieutenant-Colonel A. T. Bown, I.M.S. (Bengal), is placed, on special duty under the orders of the Director General, Indian Medical Service.

The services of Captain T. H. Delany, M.D., I.M.S., are replaced at the disposal of the Government of Bengal.

Lieutenant-Colonel F. S. Peck, I.M.S. (Bengal), Professor of Midwifery, Medical College and Obstetric Physician and Surgeon, Eden Hospital, Calcutta, is granted privilege leave for eleven days with furlough out of India on medical certificate for five months and nineteen days in continuation, with effect from the 26th March 1908.

Lieutenant-Colonel C. R. M. Green, M.D, F.R.C.S., I.M.S. (Bengal), is appointed to officiate as Professor of Midwifery, Medical College and Obstetric Physician and Surgeon, Eden Hospital, Calcutta, during the absence on leave of Lieutenant-Colonel F. S. Peck, I.M.S. (Bengal), or until further orders.

The undermentioned second class Assistant Surgeons, having completed seven years' service in that class, to be 1st class Assistant Surgeons, with effect from the 11th February 1908 :—

George Francis Byers, Charles William Ernest Kerr, Joseph Lee, Reginald Alexander Boermel, Martyrose Mackertich, Owen John Apear, William James Corridon, Edward James Greson, Eugene Alfred St. Romaine, Henry Lovell William Clark, Ernest Armin Carapiet Griffiths.

First Class (Supernumerary) Senior Hospital Assistant Ram Ghulam, Indian Subordinate Medical Department, Bengal, has changed his name to Ram-datt Awasthi, and all official documents and notifications concerning this medical subordinate should be altered accordingly.

Third class Hospital Assistant Atar Singh Chandail, Indian Subordinate Medical Department, Bengal, has changed his name to Atar Singh, and all official documents and notifications concerning this medical subordinate should be altered accordingly.

UNITED PROVINCES.

Civil Assistant Surgeon Govind Chandra Banerji, attached to the Sadr Hospital, Farrukhabad, privilege leave for two months, with effect from the 29th January 1908.

Civil Assistant Surgeon Benoy Bhushan Roy, on reserve duty, Ghazipur, to the charge of the District Hospital, Budaun as a temporary measure.

Civil Assistant Surgeon Sham Manohar Lal, on reserve duty, Bareilly, to the charge of the Sandila Dispensary, Hardoi district.

Civil Assistant Surgeon Ananta Kumar Bose, attached to the District Hospital, Muzaffarnagar, to reserve duty, Muzaffarnagar.

Civil Assistant Surgeon Nand Kishore, on return from leave, to reserve duty, Lucknow.

First grade Assistant Surgeon Ram Charan, attached to the Sadr Dispensary, Budaun, is promoted to the senior grade with effect from the 20th January 1908, the date of the Government of India order sanctioning an additional appointment in the senior grade to the grade of Civil Assistant Surgeons in the United Provinces.

Civil Assistant Surgeon Ananta Kumar Bose was on reserve duty at Muzaffarnagar from the 8th February 1908 to the 14th February 1908.

Lieutenant-Colonel C. Mactaggart, I. M. S., Inspector-General of Prisons, United Provinces, privilege leave, combined with furlough, for a total period of one year, with effect from the 26th January 1908.

Lieutenant-Colonel J. M. Cadell, I. M.S., Civil Surgeon, is transferred from Jaunpur to Ghazipur.

BURMA.

First Class Military Hospital Assistant, No. 1288, Munisawmy Mudaliar relinquished charge of column duty in the Bhamo District on the afternoon of the 2nd March 1908, and assumed charge at the Civil Hospital, Bhamo, on the forenoon of the forenoon of 7th March 1908.

The first sixty days of the leave granted to First Class Military Hospital Assistant, No. 1302, O. Ambu Panikar in this office Notification No. 264, dated the 18th March 1908, are on full pay.

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ON · 26^TH · AUGUST · 1886 · AGED · 88 ·
AND · OF · EMMA · CATHERINE · LYNES ·
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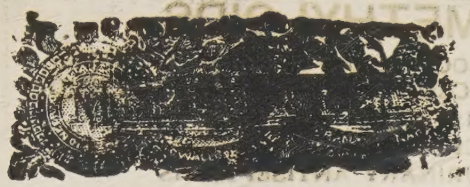

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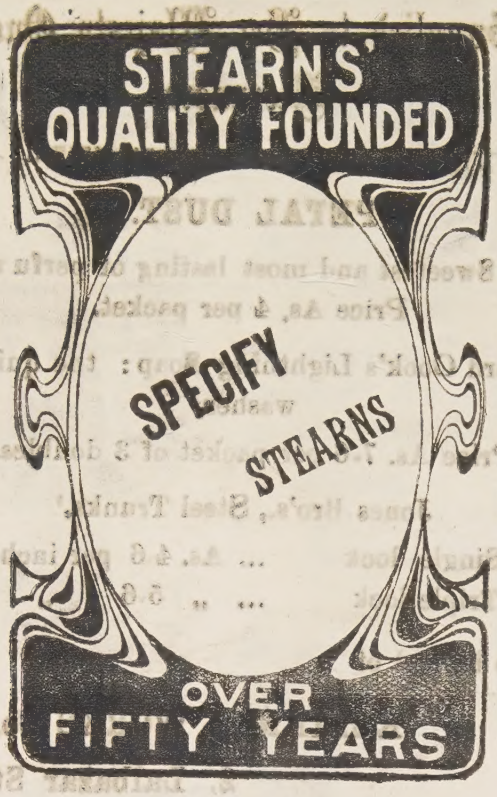

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